

ANTHONY CIRCLE DEFINITIVE SUBDIVISION & SITE PLAN

#35 MODOC STREET
WORCESTER, MA 01607

OWNER/ APPLICANT:

ST. ANTHONY REALTY, LLC

234 WEST MAIN STREET
HOPKINTON, MA 01748

12/14/2021

CITY OF WORCESTER CONSERVATION
COMMISSION FILING PLANS

PREPARED BY:

Joseph Graham, PE

13 Snow Drive.
Westford, MA 01886
(978) 501.2695

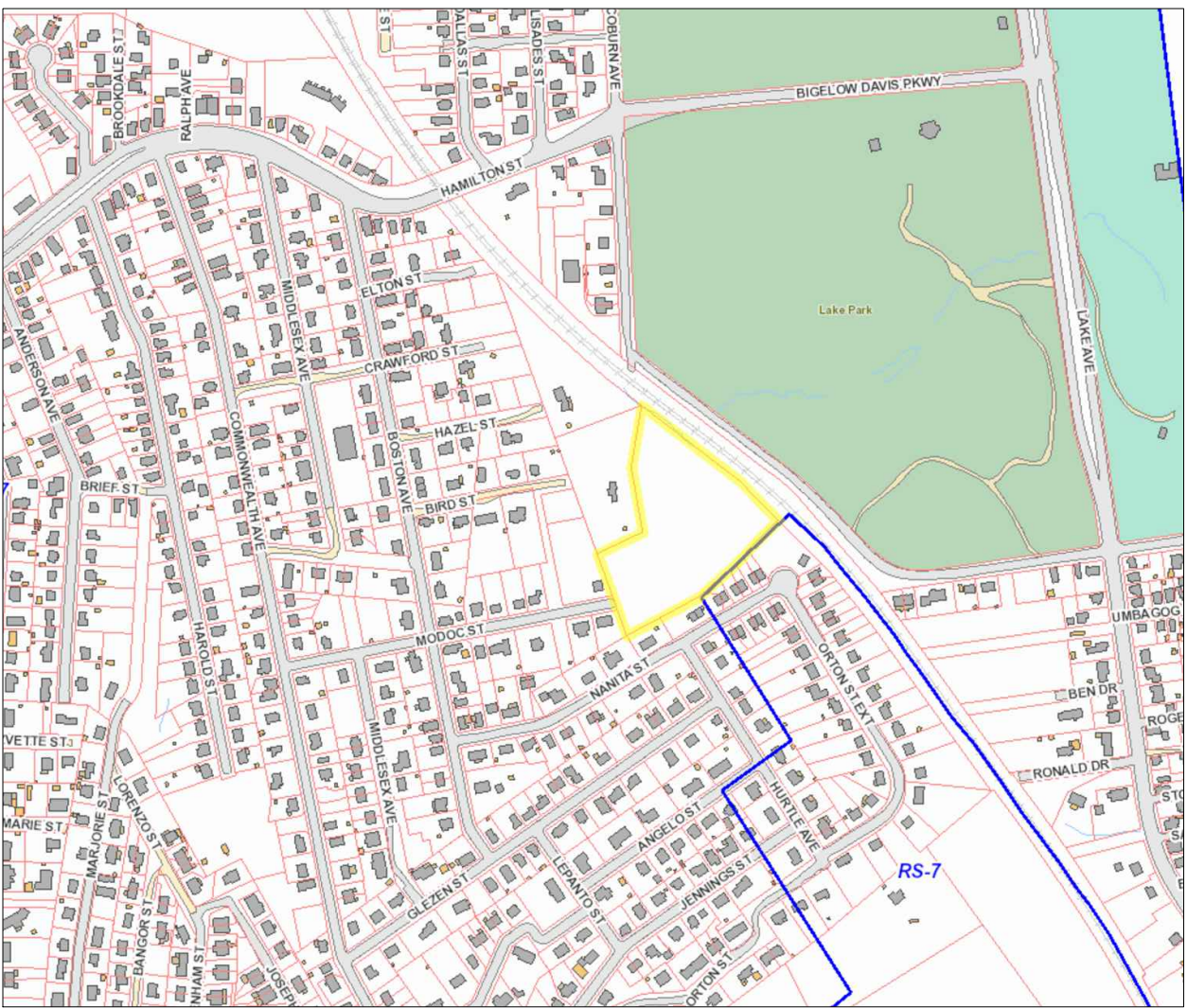
SURVEYED BY:

Robert D. O'Neil Jr. P.L.S.

66 Drury Ln.
Worcester, MA 01607
(508) 755-3515

NOTE:

- THESE PLANS REFLECT THE APPROVED SITE PLANS PERMITTING DRAWINGS REV1 DATED 6/11/2018. WHICH RECEIVED PLANNING BOARD APPROVAL ON JUNE 13, 2018.



LOCUS
1"=1000'

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REVISION: 3 DATE: 12/14/2021

TABULAR ZONING SUMMARY					
LOT	FRONTAGE	AREA	SIDE SET BACK	FRONT SETBACK	REAR SETBACK
SINGLE FAMILY SEMI-DETACHED	35	4000.00	8.0	20.0	20.0
SINGLE FAMILY DETACHED	65	7000.00	8	20.0	20.0
101	48.94	7586.00	23.7	24.5	118.8
102	47.25	5937.00	11.8	24.5	118.8
103	37.50	6135.00	11.2	27.9	106.3
104	37.50	5673.00	11.7	24.0	106.3
105	47.07	4611.00	11.2	22.1	90.1
106	47.08	4371.00	10.4	22.1	90.1
107	37.50	6137.00	10.3	22.0	131.2
108	37.50	7475.00	10.3	27.8	131.2
109	113.15	80591.00	11.3	22.4	368.4
110	89.78	29189.00	43.5	21.3	65.1
111	212.31	17038.00	40.5	22.9	51.2
112	40.37	4031.00	15.0	24.6	46.2
113	39.33	4000.00	14.6	24.6	46.2
114	45.58	4000.00	26.0	22.5	24.8
115	52.59	4013.00	23.3	22.0	22.0
116	50.36	4015.00	22.0	21.6	22.2
117	46.96	4334.00	27.0	23.9	22.2

- ALL WORK TO CONFORM TO CITY OF WORCESTER STANDARDS.
- ALL ELEVATIONS AND BENCHMARKS REFER TO NAD-83 DATUM.
- THE APPLICANT WILL PROVIDE, AT NO COST TO THE CITY, ALL FACILITIES SHOWN ON THE PLAN INCLUDING BUT NOT LIMITED TO ROADWAYS, CURBS, BOUND, DRAINAGE SYSTEMS, SANITARY SEWER SYSTEMS, UTILITIES, STREET LIGHTS, AND EARTHWORKS EXCEPT AS OTHERWISE NOTED.



CONSTRUCTION NOTES:

1. HAYBALE SILTATION FENCING WILL BE INSTALLED ALONG THE PERIMETER OF THE SITE AND TO REMAIN IN PLACE UNTIL ALL SLOPES ARE STABILIZED.
2. SILT SACKS SHALL BE INSTALLED UPON INSTALLATION OF PROPOSED CATCH BASINS AND AT THE COMMENCEMENT OF WORK FOR EXISTING CATCH BASINS.
3. SILT SACKS AND EROSION CONTROL FENCING WILL BE MAINTAINED THROUGHOUT THE CONSTRUCTION.
4. TIRE SCRUBBER SHALL BE INSTALLED AT SITE ENTRANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
5. ALL TREE AND STUMP REMOVAL SHALL BE IN ACCORDANCE WITH THE ASIAN LONGHORNED BEETLE PROGRAM REQUIRMENTS AND ALL NEW TREES AND SHRUB PLANTINGS SHALL BE ASIAN LONHORNED BEETLE RESISTANT.
6. NO ROCK CRUSHING OR GRINDING OPERATIONS SHALL BE PERMITTED ONSITE AND THE CONTRACTOR SHALL TAKE STEPS TO LIMIT UNNECESSARY NOISE AND COMPLY WITH THE CITY OF WORCESTER'S GENERAL REVISED ORDINANCE RELATIVE TO NOISE CONTROL.
7. PRIOR TO AND CONTINUING DURING ALL CONSTRUCTION ACTIVITIES, APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES INCLUDING HAY BALES AND SILT FENCES, SHALL BE INSTALLED AND MAINTAINED SUBJECT TO THE OVERSIGHT AND DIRECTION OF THE COMMISSIONER OF INSPECTIONAL SERVICES.
8. A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF WORCESTER'S DEPARTMENT OF PUBLIC WORKS & PARKS' DIVISION OF ENGINEERING SHALL BE HELD PRIOR TO ANY CONSTRUCTION.
9. ALL WORK SHALL CONFORM TO THE CITY OF WORCESTER'S SUBDIVISION RULES AND REGULATIONS, ZONING ORDINANCE, PLANNING BOARD DECISION AND CONDITIONS OF APPROVAL, AND TO THE STANDARDS CONTAINED IN THE CITY OF WORCESTER, DEPARTMENT OF PUBLIC WORKS & PARKS, ENGINEERING DIVISION, CONSTRUCTION MANAGEMENT SECTION, STANDARD SPECIFICATIONS & DETAILS, MOST RECENT EDITION.
10. SUBJECT TO THE ZONING ENFORCEMENT OFFICER'S DETERMINATION THAT THE PARCELS COMPLY WITH ALL THE RELEVANT PROVISIONS OF THE ZONING ORDINANCE.
11. STREET LIGHTS WITHIN DEVELOPMENT PER CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS DETERMINATION.
12. THE APPLICANT SHALL COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION TO OBTAIN A MUNICIPAL ADDRESS FOR EACH PROPOSED LOT.
13. THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO CONTROL DUST DURING CONSTRUCTION BY UTILIZING A WATERING SYSTEM AND EMPLOYING THE USAGE OF OTHER DUST SUPPRESSANT METHODS SUCH AS CHLORIDE SALTS (CALCIUM OF MAGNESIUM CHLORIDE).
14. CONSTRUCTION OPERATIONS SHALL BE LIMITED FROM MONDAY TO SATURDAY BETWEEN THE HOURS OF 7AM TO 7PM. THERE SHALL BE NO WORK ON SUNDAYS OR HOLIDAYS.
15. ALL CONSTRUCTION EQUIPMENT SHALL BE WELL MAINTAINED AND HAVE FUNCTIONING MUFFLERS AND SHALL COMPLY WITH THE DEPARTMENT OF ENVIRONMENTAL PROTECTIONS ANTI-IDLING REGULATIONS TO PREVENT UNNECESSARY NOISE AND AIR POLLUTION WHILE NOT IN PRODUCTIVE USE.
16. TO MITIGATE DUST ON THE WORK SITE, THE CONTRACTOR SHALL HAVE ONSITE WATER TRUCKS, MISTERS AND CHEMICAL TREATMENT, SUCH AS CALCIUM CHLORIDE DURING EARTHMOVING ACTIVITIES. ADDITIONALLY, EXCAVATED SOILS SHALL BE DIRECTLY TRANSFERRED TO COVERED TRUCKS AND NOT STOCKPILED.

GENERAL NOTES:

- PROPERTY LINES & TOPOGRAPHIC SURVEY REVIEWED BY ROBERT D. O'NEIL JR., R.P.L.S. 66 DRURY LANE, WORCESTER, MASSACHUSETTS, 01609
- PROPOSED GRADING/ DESIGN REVIEW BY JOSEPH GRAHAM, PE, 119 PIKE ST. WORCESTER, MA 01607
- ALL CONSTRUCTION MATERIALS & STANDARDS SHALL CONFORM TO THE CITY OF WORCESTER STANDARD SPECIFICATIONS. FOR ADDITIONAL DESIGN DETAILS CONSULT THE CITY OF WORCESTER'S "CONSTRUCTION DETAIL MANUAL" AS PREPARED BY THE DEPARTMENT OF PUBLIC WORKS.
- ANY OR ALL PROPOSED UTILITY CONNECTIONS (i.e. SEWER & WATER) TO BE INSTALLED PER CITY OF WORCESTER STANDARDS.
- ANY CHANGES OR AMENDMENTS TO THIS PLAN WILL REQUIRE APPROVAL FROM JOSEPH GRAHAM (THE ENGINEER).
- SEVENTY TWO HOURS PRIOR TO COMMENCING ANY EXCAVATION, THE CONTRACTOR SHALL NOTIFY DIGSAFE AT (888) 344-7233. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF NEW UTILITIES WITHIN IN THE VICINITY OF EXISTING UTILITIES. (UNDERGROUND AND OVERHEAD) WITH THE APPROPRIATE UTILITY PROVIDER.
- THE CONTRACTOR SHALL:
 - BE RESPONSIBLE TO COORDINATE HIS WORK WITH THE MUNICIPALITY TO LIMIT THE POTENTIAL DISRUPTIONS TO THE GENERAL PUBLIC.
 - EMPLOY DUE CARE AND CAUTION TO PROTECT THE PUBLIC FROM DANGERS ASSOCIATED WITH THE OPERATION.
- THE CONTRACTOR SHALL RECORD AND PROVIDE THE OWNER WITH AS-BUILT LOCATIONS OF ALL UTILITIES INSTALLED AS PART OF HIS/HER WORK, INCLUDING UTILITIES NOT INDICATED ON THE PLAN (I.E. GAS, CABLE, TV TELEPHONE, ELECTRIC, ETC.) IF APPLICABLE.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO LAY OUT THE CONSTRUCTION AS SHOWN ON PLAN.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT THE PROPOSED CONSTRUCTION ACTIVITIES DO NOT DAMAGE OR UNDERMINE EXISTING SLOPES, BUILDINGS, WALLS, STRUCTURES, ETC. IN THE AREA AROUND THE CONSTRUCTION. REPAIR OF EXISTING SLOPES, BUILDINGS, WALLS, STRUCTURES, ETC. THAT ARE DAMAGED OR UNDERMINED BY THE CONTRACTORS WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- EXISTING UTILITIES WERE LOCATED AS PART OF THIS PLAN AND ARE TO BE FIELD VERIFIED. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE EXISTING UTILITY LOCATIONS AND ENSURING THAT THE PROPOSED WORK DOES NOT CONFLICT WITH THE EXISTING UTILITY NOT SHOWN. ALL REQUIRED PERMITS SHALL BE SECURED PRIOR TO COMMENCING WORK. PRIOR TO COMMENCING ANY WORK ONSITE THE CONTRACTOR SHALL NOTIFY THE CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS.
- SUITABLE FILL SHALL CONSIST OF MATERIAL FREE OF ORGANIC MATERIALS, LOAM, AND ANY DELETERIOUS MATERIAL. FILL SHALL NOT CONTAIN STONES LARGER THAN 10" IN ANY DIMENSION, AND SHALL HAVE LESS THAN 75% PASSING THE NO. 4 SIEVE AND A MAXIMUM OF 20% PASSING THE NO. 200 SIEVE. SUITABLE FILL SHALL NOT CONTAIN ANY BUILDING RUBBLE, GRANITE OR CONCRETE BLOCK, ROOFING MATERIALS, OR OTHER CONSTRUCTION REFUSE. AT THE TIME OF PLACEMENT SUITABLE FILL SHALL NOT CONTAIN FROST, SNOW, OR ICE AND SHALL NOT CONTAIN WATER GREATER THAN THE OPTIMAL MOISTURE CONTENT.
- INVERT ELEVATIONS INDICATED AT THE BUILDING/FOUNDATION SHOULD BE COORDINATED BETWEEN THE SITE PLAN AND THE PLUMBING CONTRACTOR.

DIGSAFE:

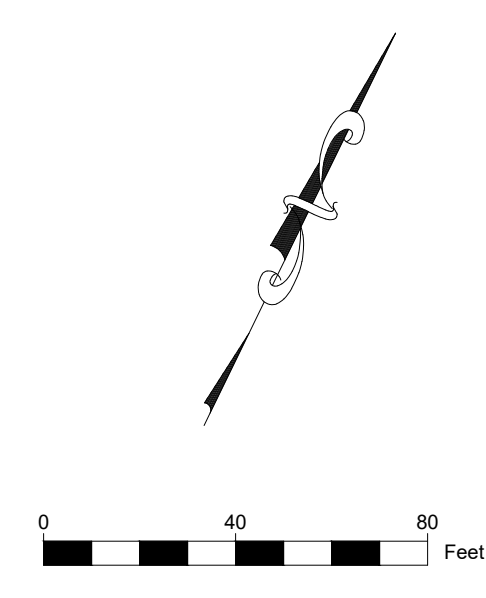
- EXCEPT FOR VISIBLE STRUCTURES (MANHOLES, GATES, POLES, ETC.) LOCATED BY ROBERT D. O'NEIL JR., R.P.L.S. ALL UNDERGROUND UTILITIES SHOWN WERE COMPLIED ACCORDING TO AVAILABLE RECORD PLANS FOR THE VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE ONLY. ACTUAL LOCATIONS MUST BE DETERMINED I THE FIELD BEFORE DESIGNING, EXCAVATING, BLASTING, OR INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION, OR REPAIRING. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE CONTACTED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN. NOT RESPONSIBLE FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN. THE CONTRACTOR IS TO CONTACT "DIGSAFE" @ 1-888-344.7233 PRIOR TO ANY CONSTRUCTION.

Project St. Anthony Cir. Subdivision		
Date 12/14/21		
Scale NA		
General Notes		
<p>REFERENCES:</p> <p>W.D.R.D. BOOK: 56351 PG: 21 W.D.R.D. PLAN BOOK: 8 PLAN: 17 W.D.R.D. PLAN BOOK: 27 PLAN: 41 W.D.R.D. PLAN BOOK: 450 PLAN: 80 W.D.R.D. PLAN BOOK: 523 PLAN: 112 W.D.R.D. PLAN BOOK: 535 PLAN: 57 W.D.R.D. PLAN BOOK: 542 PLAN: 66 W.D.R.D. PLAN BOOK: 582 PLAN: 125 W.D.R.D. PLAN BOOK: 605 PLAN: 99 W.D.R.D. PLAN BOOK: 631 PLAN: 80 MBL: 37-017-00001A</p> <p>ZONING DISTRICT: RL-7 SINGLE FAMILY SEMI-DETACHED</p> <ul style="list-style-type: none">• MINIMUM FRONTAGE: 35 FT./D.U.• MINIMUM LOT AREA: 4,000 S.F./D.U.• FRONT SETBACK: 20 FT.• SIDE SETBACK: 8 FT.• REAR SETBACK: 20 FT.		
3	CON COM PLAN	12/14/21
No.	Revision/Issue	Date

Firm Name and Address
Joseph Graham, PE
13 Snow Dr.
Westford, MA 01886
(978) 501.2695

Project Name and Address
St. Anthony Cir. Subdivision
#35 Modoc Street
Worcester, MA 01607
Value

Sheet
G-1.0



Firm Name and Address

Joseph Graham, PE

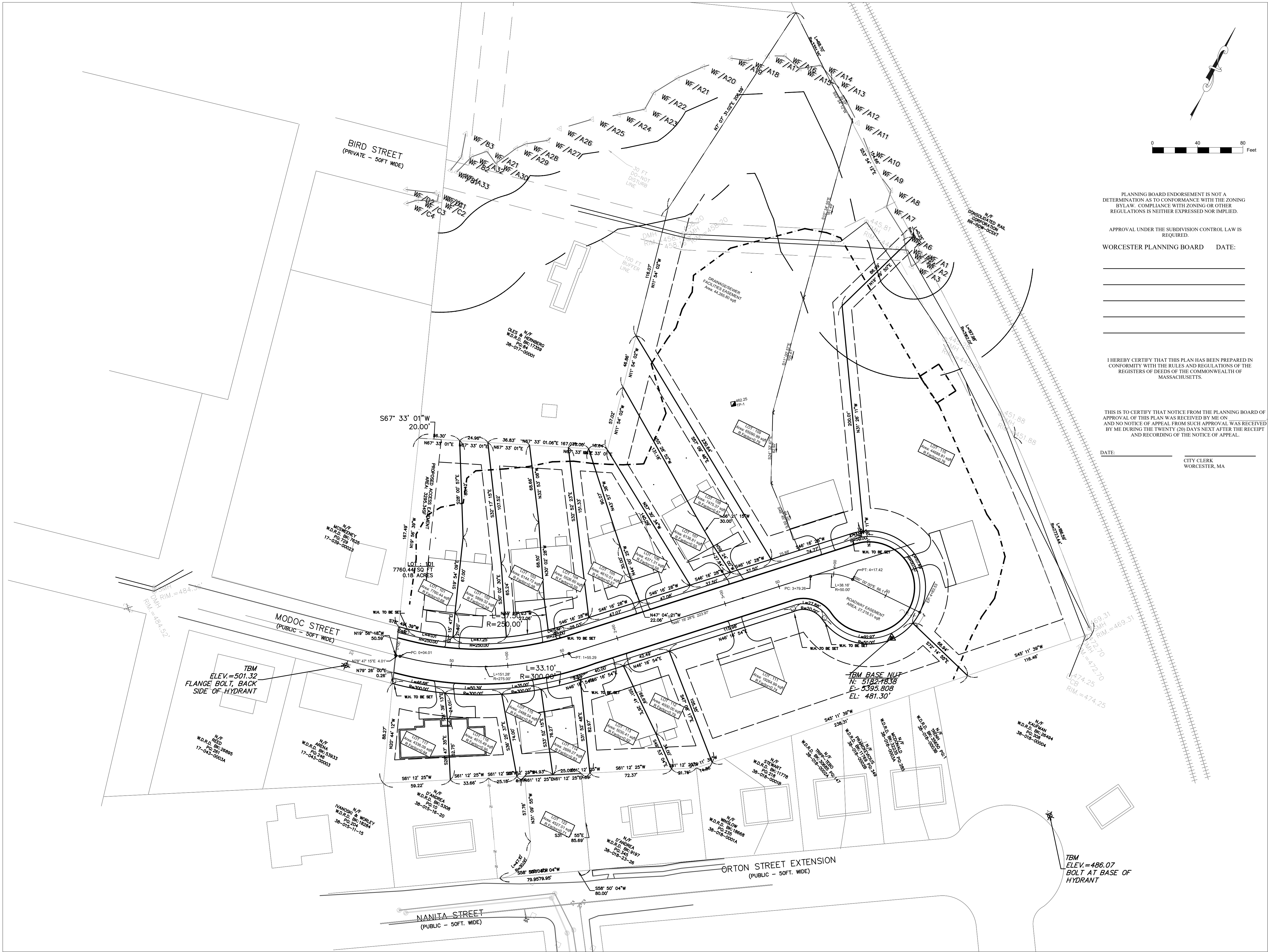
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Project Name and Address

St. Anthony Cir. Subdivision
#35 Modoc Street
Worcester, MA 01607

Sheet

C-1.0



Project
St. Anthony Cir. Subdivision

Date
12/14/21

Scale
1" = 40'

General Notes

- NOTE:
- RECEIVED PLANNING BOARD APPROVAL ON 6/13/2018
 - REFER TO THE RESTRICTIVE COVENANT AS FORM OF SECURITY.

PLANNING BOARD ENDORSEMENT IS NOT A DETERMINATION AS TO CONFORMANCE WITH THE ZONING BYLAW. COMPLIANCE WITH ZONING OR OTHER REGULATIONS IS NEITHER EXPRESSED NOR IMPLIED.

APPROVAL UNDER THE SUBDIVISION CONTROL LAW IS REQUIRED.

WORCESTER PLANNING BOARD DATE:

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

THIS IS TO CERTIFY THAT NOTICE FROM THE PLANNING BOARD OF APPROVAL OF THIS PLAN WAS RECEIVED BY ME ON AND NO NOTICE OF APPEAL FROM SUCH APPROVAL WAS RECEIVED BY ME DURING THE TWENTY (20) DAYS NEXT AFTER THE RECEIPT AND RECORDING OF THE NOTICE OF APPEAL.

DATE: CITY CLERK
WORCESTER, MA

3 PB COMMENTS 12/31/18

3 CON COM PLAN 12/14/21

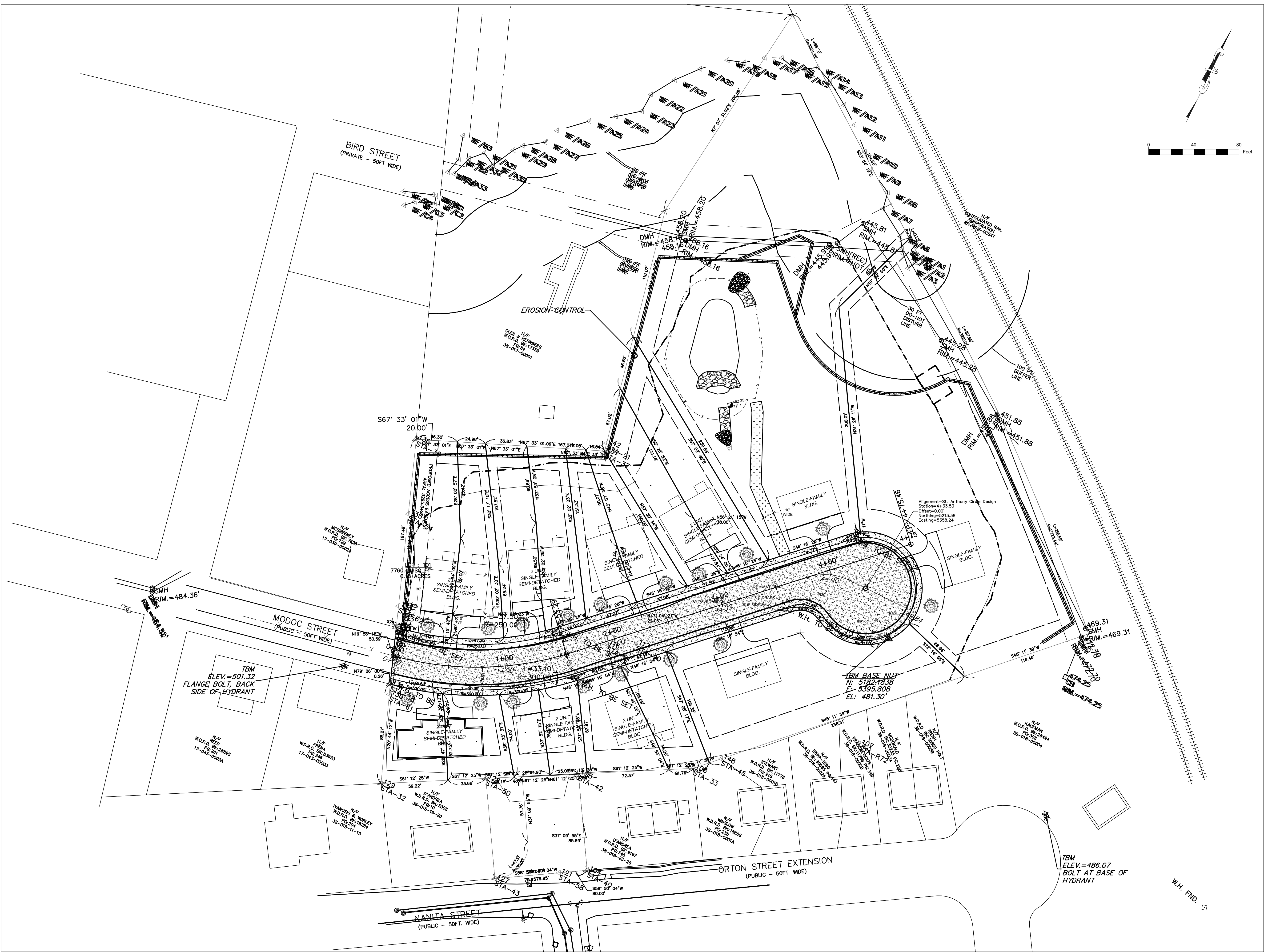
No. Revision/Issue Date

Firm Name and Address
Robert D. O'Neil Jr. RPLS

66 Drury Lane
Worcester, MA 01609
(508) 868-5144

Project Name and Address
St. Anthony Cir. Subdivision
#35 Modoc Street
Worcester, MA 01607

Sheet
C-1.1



Project
St. Anthony Cir. Subdivision

Date
12/14/21

Scale
1" = 40'

General Notes

LANDSCAPING NOTES:

PROPOSED LANDSCAPE BEDS:
(17) CORNELIAN CHERRY DOGWOOD
- 3 1/2 IN. TRUNK DIAMETER 25 FT.
ON CENTER (ASIAN LONGHORNED
BEETLE - RESISTANT)

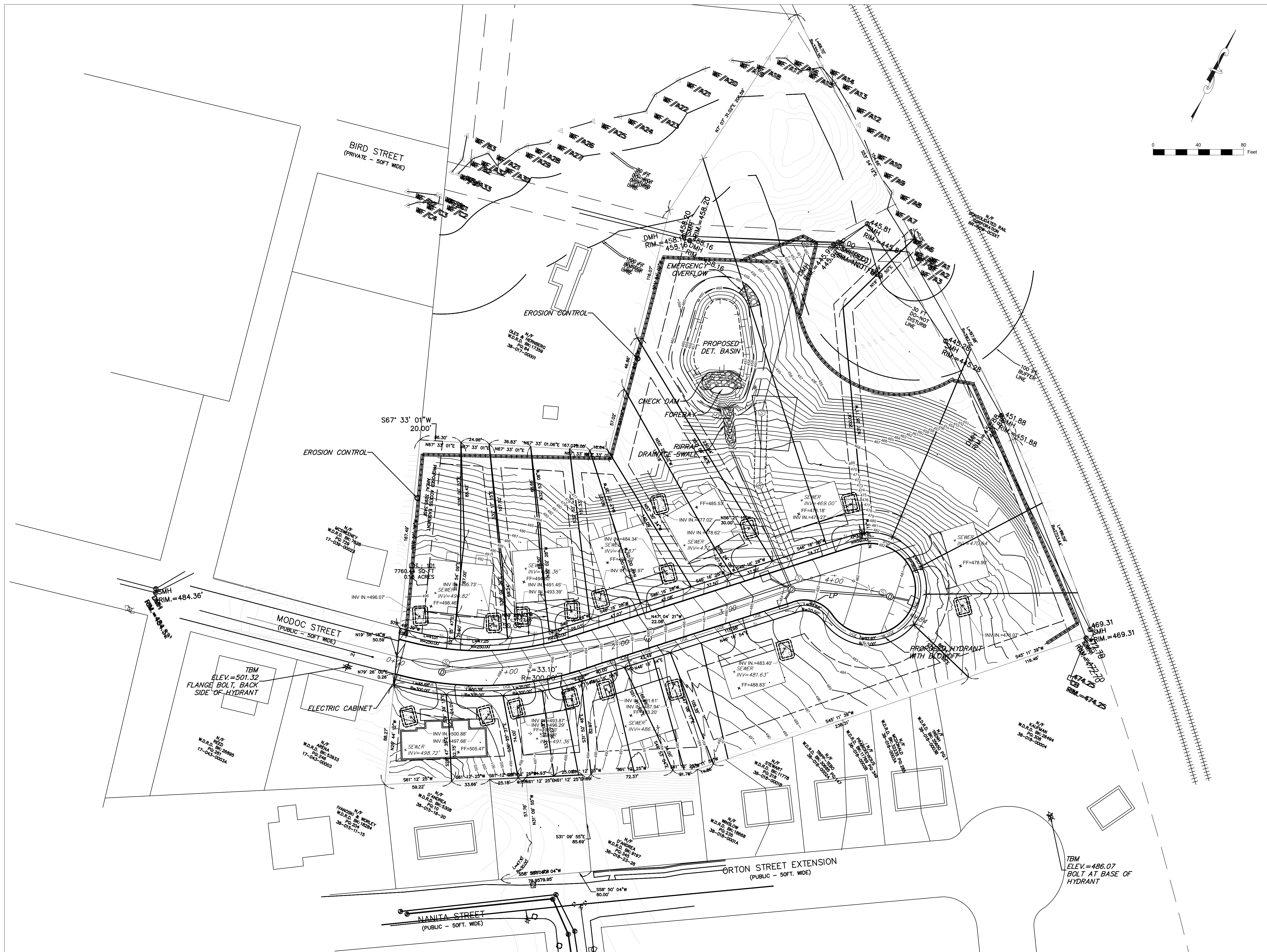
- LANDSCAPED SIDEWALK BUFFER
- PROPOSED ASPHALT
- PROPOSED HMA SIDEWALK
- PROPOSED GRAVEL ACCESS ROAD
- RIPRAP SWALE

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St. Anthony Cir. Subdivision
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Worcester, MA 01607

Sheet
C-1.2



Project
St. Anthony Cir. Subdivision

Date
12/14/21

Scale
1" = 40'

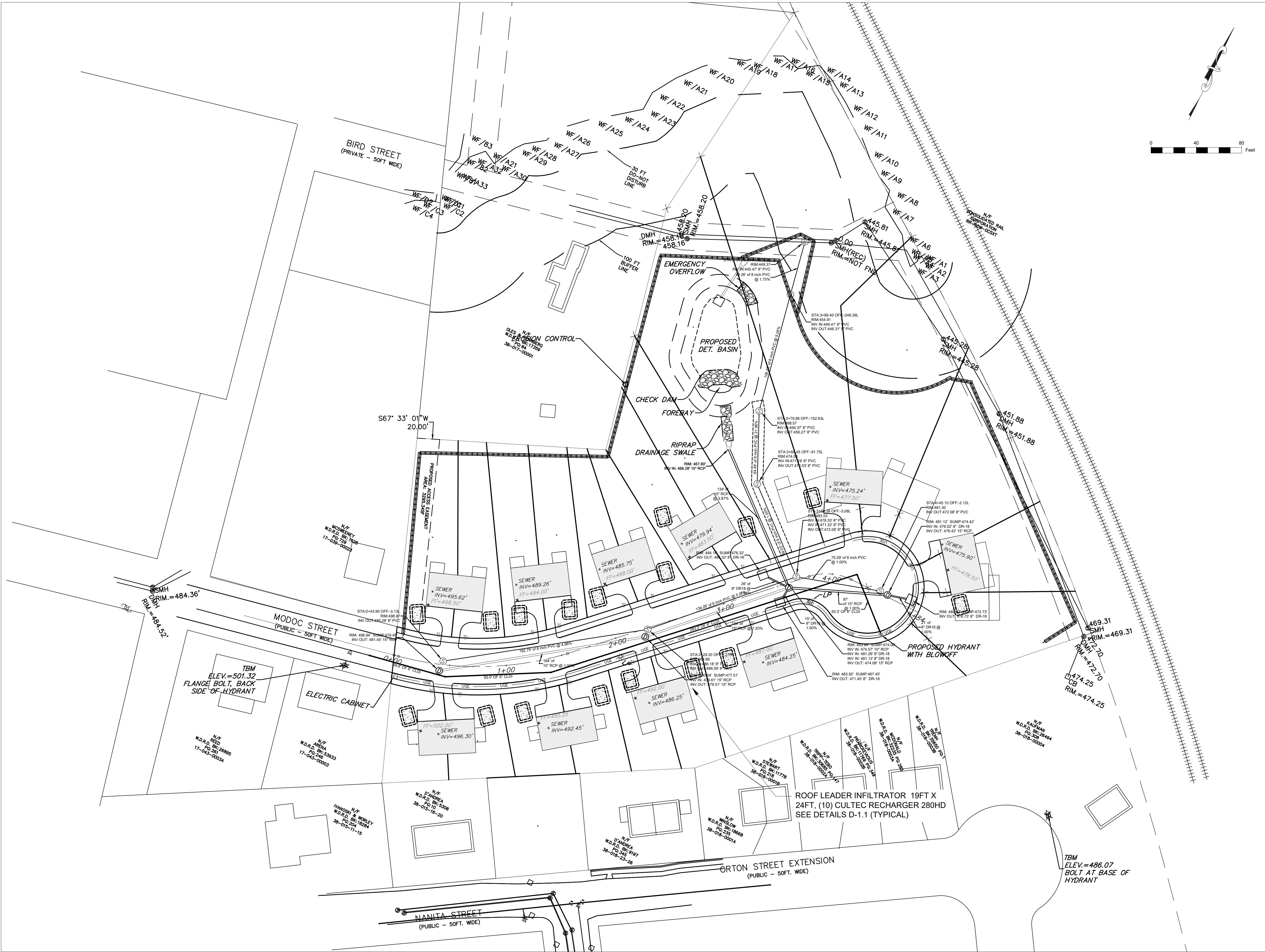
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St. Anthony Cir. Subdivision
#35 Modoc Street
Worcester, MA 01607

Sheet
C-1.3



Project
St. Anthony Cir. Subdivision

Date
12/14/21

Scale
1" = 40'

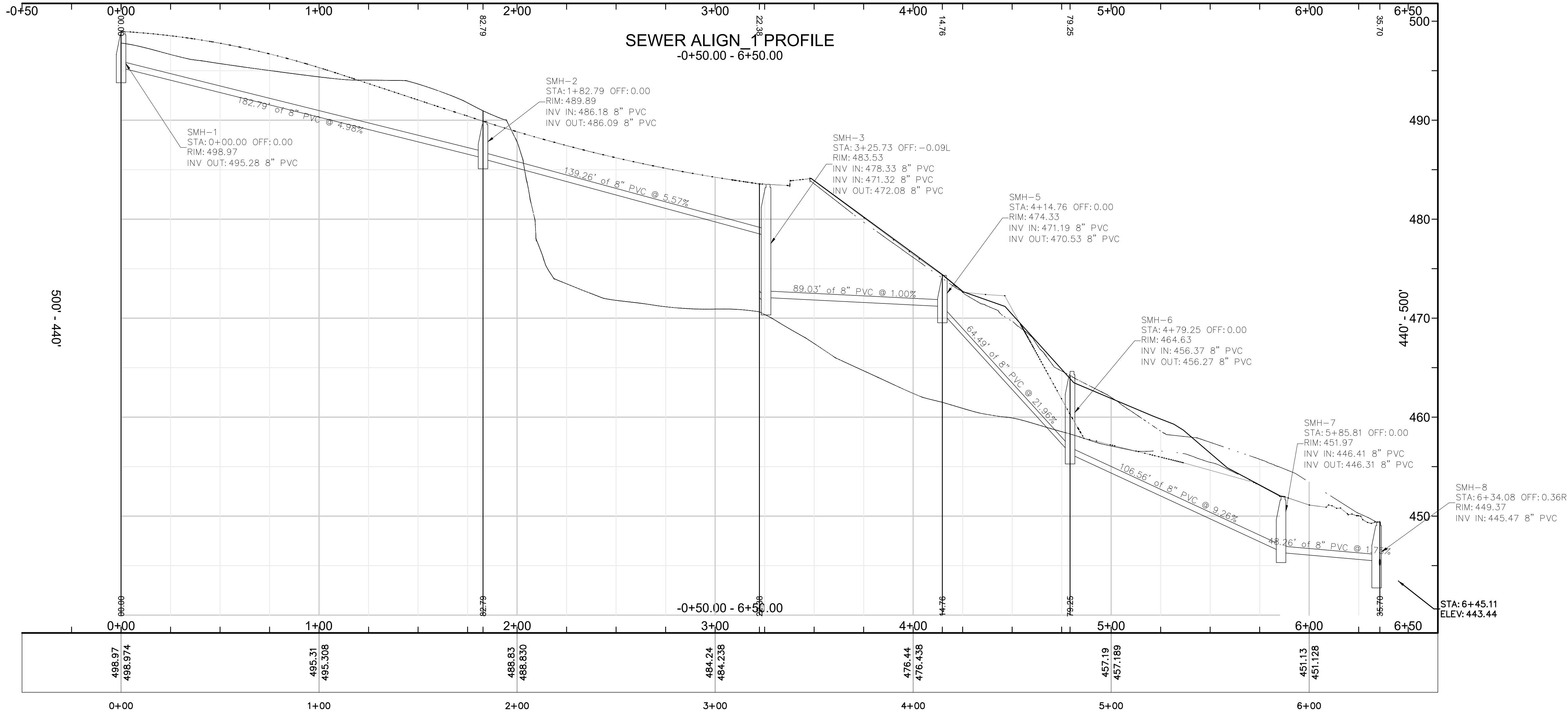
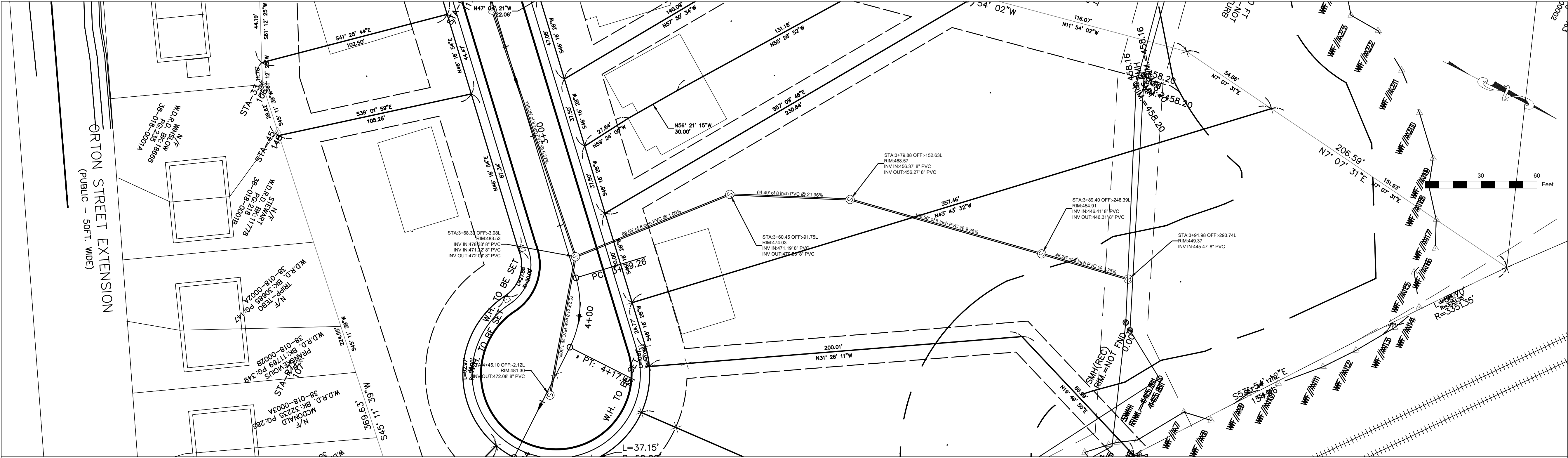
General Notes

No.	Revision/Issue	Date
3	CON COM PLAN	12/14/21

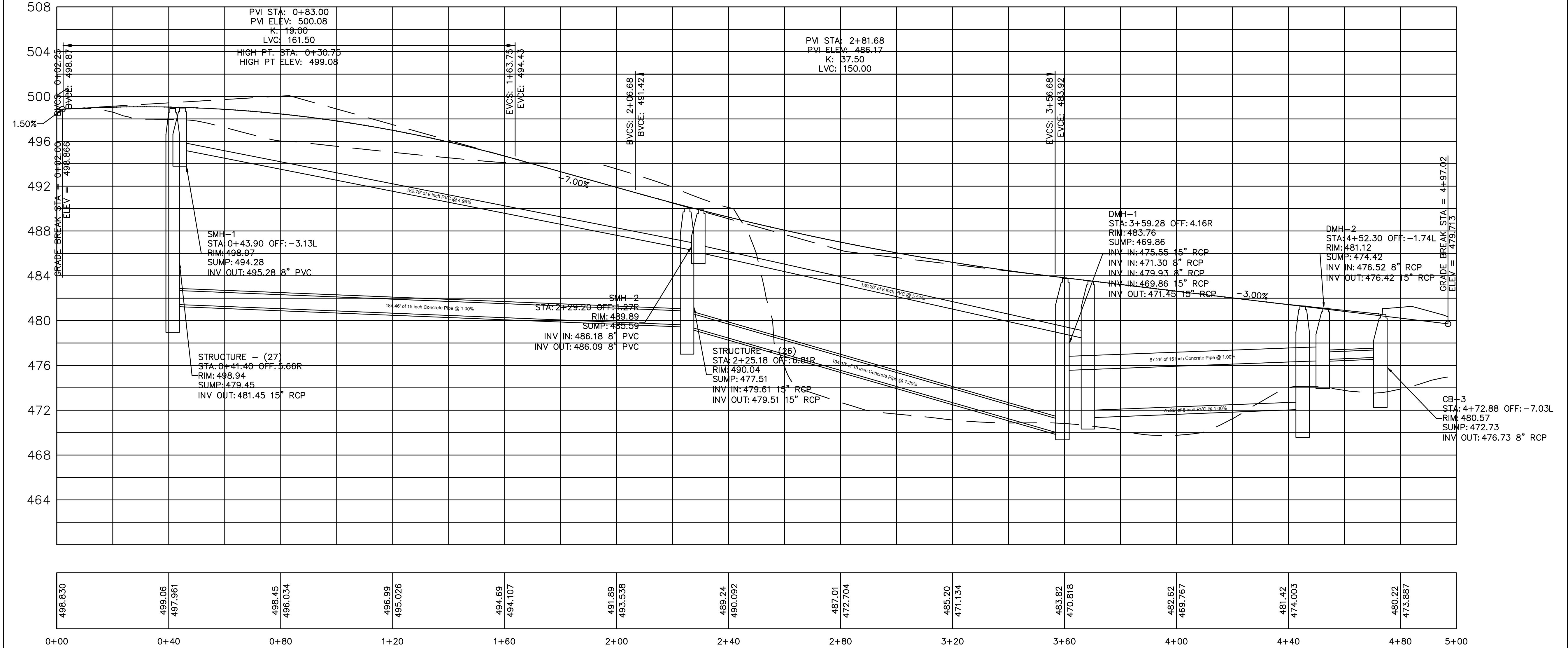
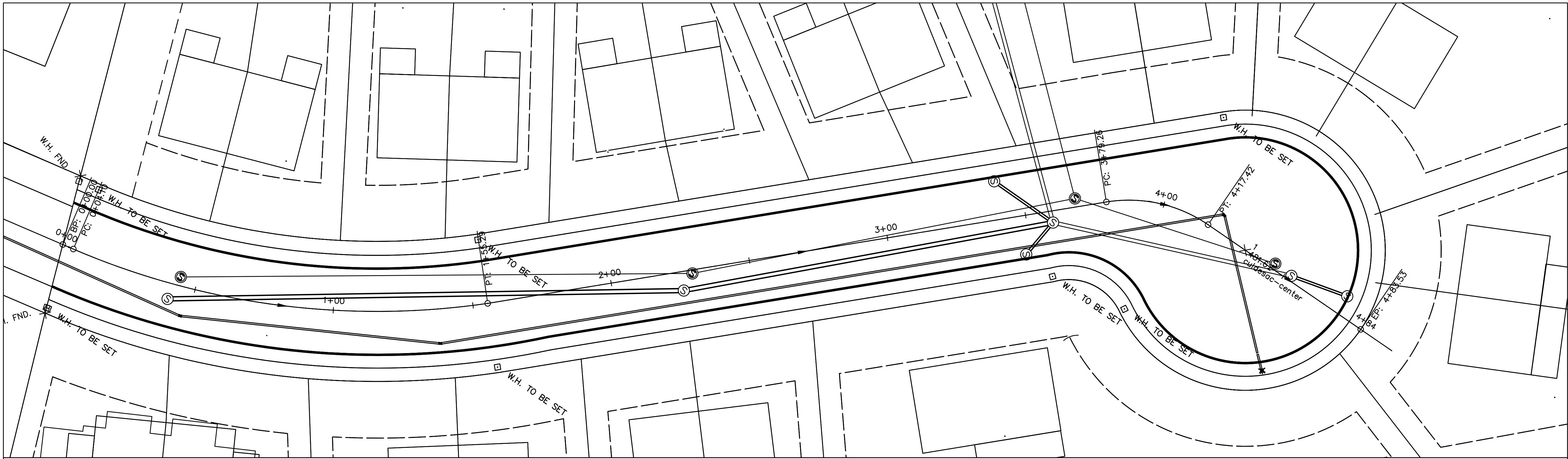
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(978) 501.2695

Project Name and Address
St. Anthony Cir. Subdivision
#35 Modoc Street
Worcester, MA 01607

Sheet
C-2.1



Project St. Anthony Cir. Subdivision		
Date 12/14/21		
Scale 1" = 20'		
General Notes		
SANITARY SEWER DESIGN NOTES: <ul style="list-style-type: none">ALL SEWER PIPE TO CONFORM TO THE CITY OF WORCESTER STANDARDS, POLYVINYLCHLORIDE(PVC) SDR-35 PIPE.ALL SEWER MAIN PIPES 8" PVC. BUILDING SERVICE CONNECTIONS 6" PVC AS SHOWN ON DETAILS.MIN PIPE SLOPE 0.5% REQUIRED. ABOVE SEWER PROFILE HAS MIN SLOPE OF 1.78%.ALL BUILDING CONNECTIONS TO BE 2% MIN. AS SHOWN ON DETAILS.MINIMUM PIPE COVER 36" AS SHOWN ON DETAILS.		
3	CON COM PLAN	12/14/21
No.	Revision/Issue	Date
Firm Name and Address Joseph Graham, PE 13 Snow Dr. Westford, MA 01886 (978) 501.2695		
Project Name and Address St. Anthony Cir. Subdivision #35 Modoc Street Worcester, MA 01607		
Sheet C-2.2		



Project
St. Anthony Cir. Subdivision

Date
6/14/18

Scale
1" = 20'

General Notes
SANITARY SEWER DESIGN NOTES:
• SEE CONSTRUCTION DETAILS FOR ROADWAY CROSS SECTION

0 20 40 Feet

1	CON COM PLAN	7/23/18
No.	Revision/Issue	Date

Firm Name and Address
Joseph Graham, PE
13 Snow Dr.
Westford, MA 01886
(978) 501.2695

Project Name and Address
St. Anthony Cir. Subdivision
#35 Modoc Street
Worcester, MA 01607

Sheet
C-2.3



Project St. Anthony Cir. Subdivision	
Date	12/14/21
Scale	1" = 20'
General Notes	

- NOTES:
- EACH RESIDENCE WILL HAVE A TWO (2) CAR GARAGE.

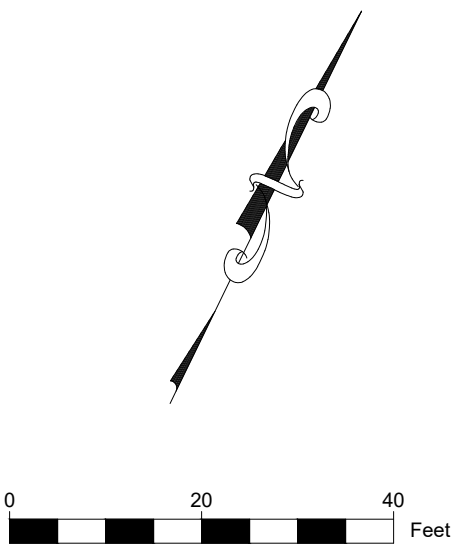
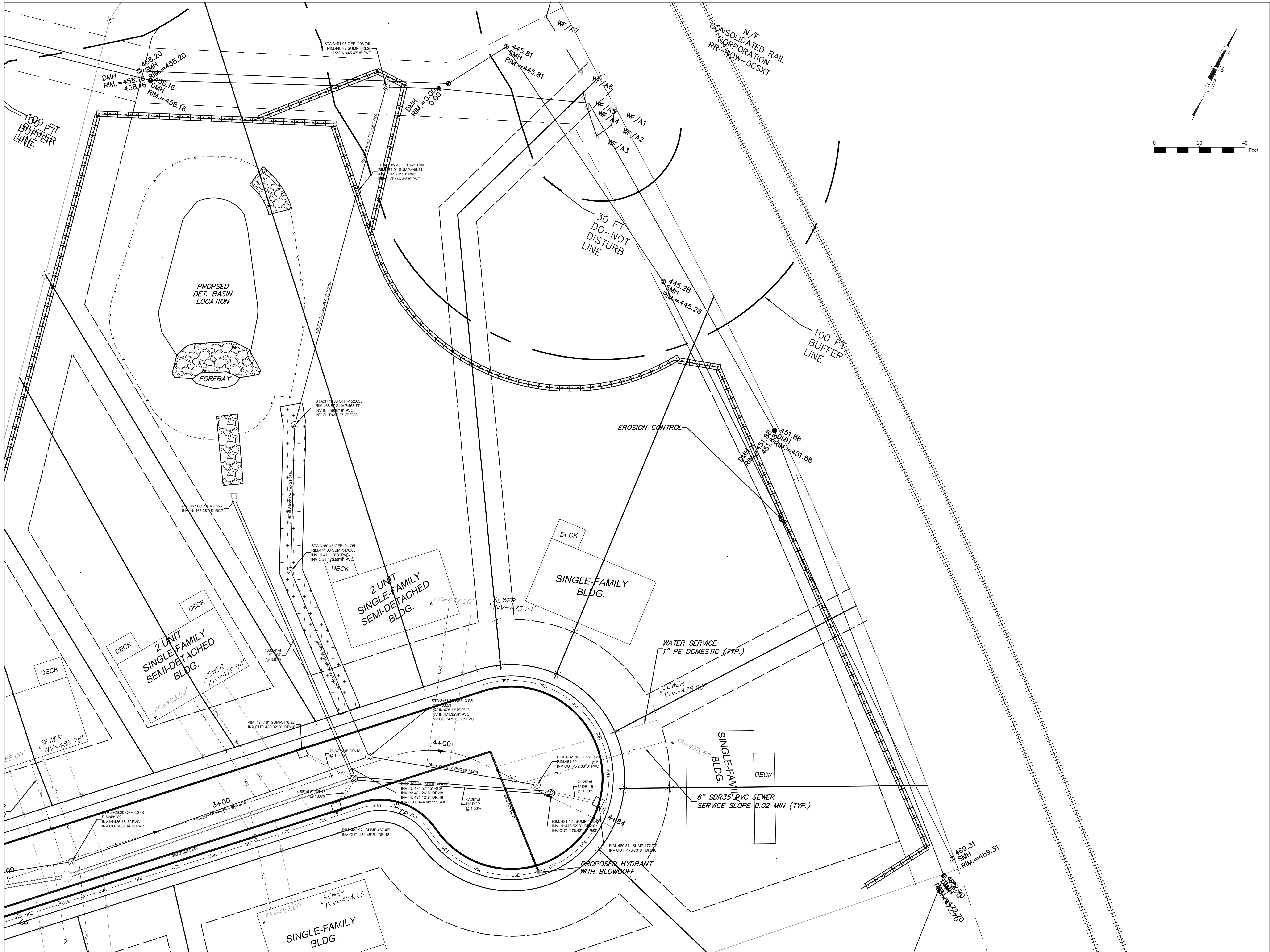
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#35 Modoc Street
Worcester, MA 01607

Sheet
C-3.1



Project St. Anthony Cir. Subdivision	
Date	12/14/21
Scale	1" = 20'
General Notes	

- NOTES:
- EACH RESIDENCE WILL HAVE A TWO (2) CAR GARAGE.

3	CON COM PLAN	12/14/21
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Sheet
C-3.2



Project

St. Anthony Cir. Subdivision

Date

5/14/18

Scale

1" = 10'

General Notes

DRAINAGE DESIGN NOTES

DRAINAGE PIPING:

- ALL DRAINAGE PIPE TO CONFORM TO THE CITY OF WORCESTER STANDARDS, REINFORCED CONCRETE PIPE CLASS III, (RCP).
- ALL DRAINAGE TRUNKLINE PIPE TO BE 15" RCP AS SHOWN ON PLANS
- ALL CATCH BASIN CONNECTIONS TO BE 8" DR-18 PIPE AS SHOWN ON PLANS.
- MINIMUM PIPE COVER TO BE 36" AS SHOWN ON DETAIL SHEET.
- ALL CATCH BASIN SHALL USE GREEN TRAP AS SHOWN ON DETAIL SHEET.
- FRAME AND GRATE TO BE CITY OF WORCESTER STANDARDS AS SHOWN ON THIS SHEET.
- CATCH BASIN FRAME TO BE INSTALLED ON 12" MIN. RED SEWER BRICK.

INFILTRATION BASIN:

- INFILTRATION BASIN DESIGN PROVIDES 1 FT. OF FREEBOARD ABOVE SPILLWAY ELEVATION.
- INFILTRATION BASIN TO BE ENCLOSED BY 6FT TALL BLACK VINYL CHAIN LINK FENCING WITH ACCESS GATE.
- FENCING TO BE INSTALLED ON OUTSIDE EDGE OF 10FT WIDE GRAVEL ACCESS ROADWAY AROUND BASIN.
- PLACE 6" MINUS RIP RAP STONE FOR SCOUR PROTECTION AT SPILLWAY ENTRANCE. RIPRAP TO BE INSTALLED 12" THICK ON A 6" BED OF M2.0.0 CRUSHED STONE.
- FOREBAY TO BE GRADED 3:1 TOWARDS BASIN TO MINIMIZE WATER EXIT VELOCITY.
- BASIN AND FOREBAY TO BE MAINTAINED PER FREQUENCY IN MASSACHUSETTS STORMWATER MANAGEMENT HANDBOOK VOL. 2.

1	CON COM PLAN	7/23/18
No.	Revision/Issue	Date

Firm Name and Address

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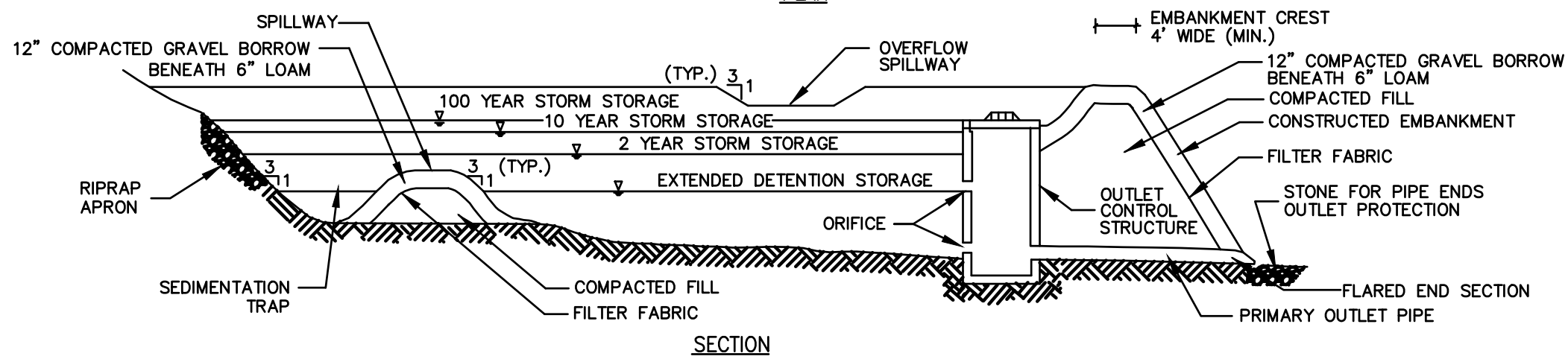
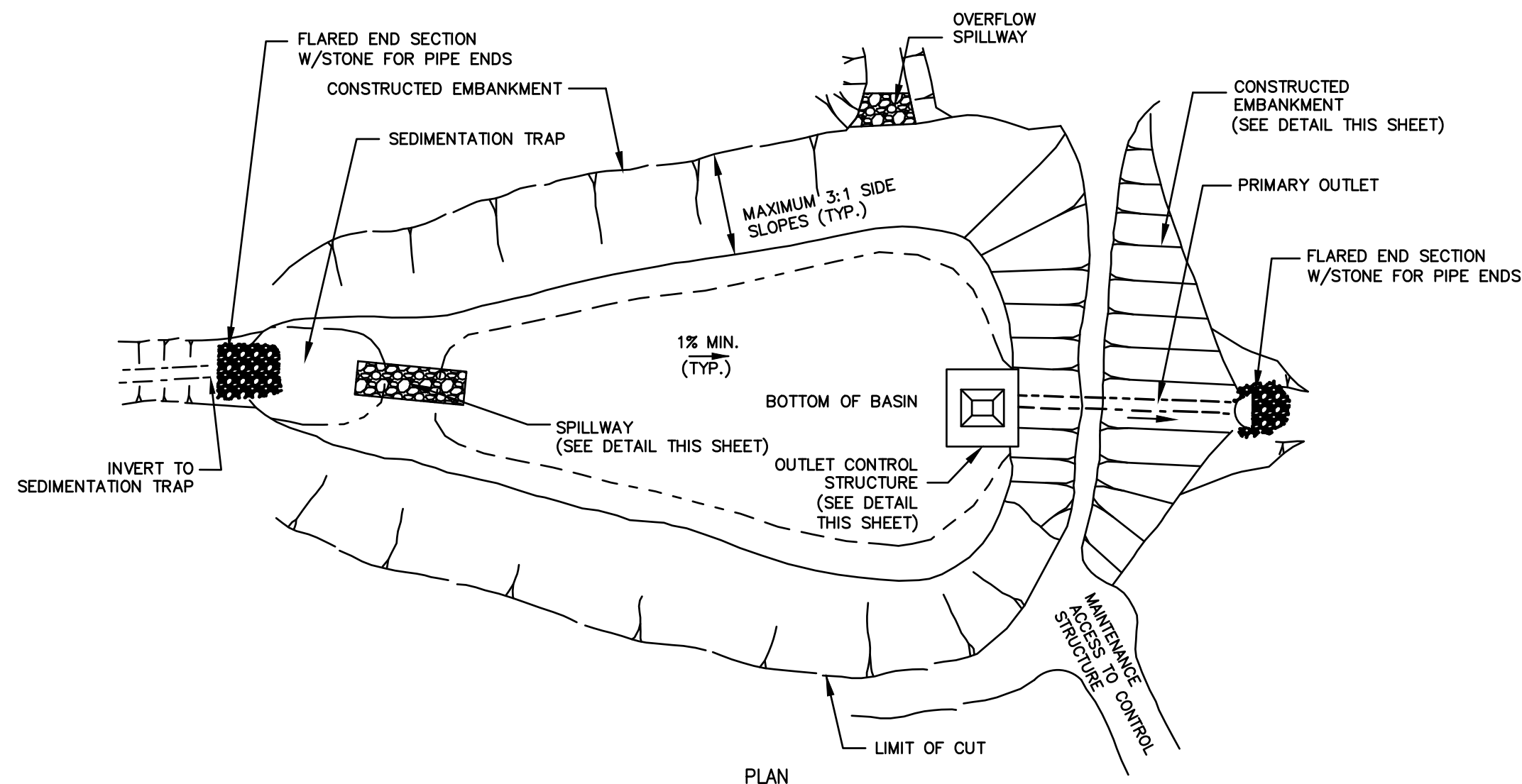
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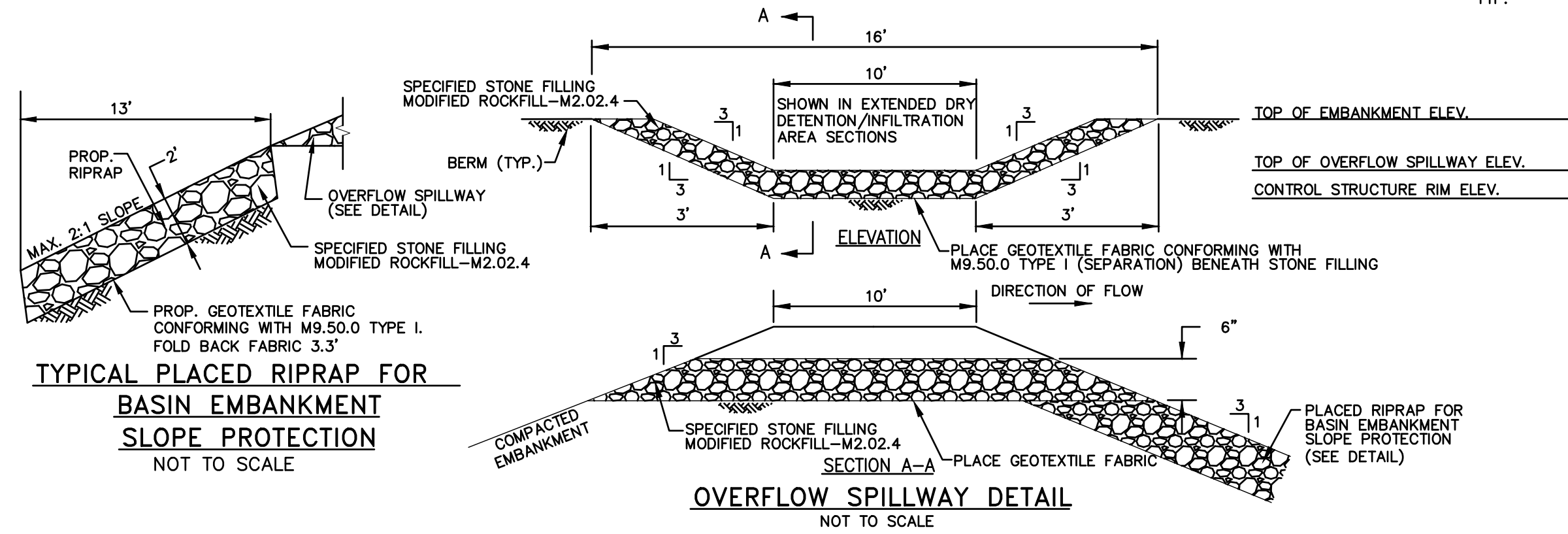
St. Anthony Cir. Subdivision
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Sheet

C-3.3



SCHMATIC CONFIGURATION FOR EXTENDED DRY DETENTION BASINS
NOT TO SCALE



TYPICAL PLACED RIPRAP FOR BASIN EMBANKMENT SLOPE PROTECTION
NOT TO SCALE

DRAINAGE SCHEDULE FOR INFILTRATION BASIN

BASIN NO.	CONTROL STRUCTURE				INLET "A"		INLET "B"		INLET "C"		OVERFLOW GRATE		PRIM. OUTLET			BOTTOM OF SED. TRAP (FOREBAY)	SED. TRAP SPILLWAY INV.	TOP OF SED. TRAP SPILLWAY	BOTTOM OF BASIN EL.	OVERFLOW SPILLWAY INV.	TOP OF BERM EL.	BORING #	GW LEVEL	
	STATION	ALIGN-MENT	OFFSET	STRUCTURE SIZE	DIA. (INCH)	INV.	DIA. (INCH)	INV.	DIA. (INCH)	INV.	SIZE (INCH)	ELEV.	DIA.	INV. UPSTREAM	INV. DOWNSTREAM									
INF 1	3+55.30	LT	ROAD	245	5'X5'	N/A	N/A	6	457.50	NA	NA	24"X48"	458.75	15"	456.00	455.29	456.50	456.00	457.50	456.00	460.00	461.00	NA	NE

NOTES: 1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET.
2. RIM ELEVATION LISTED ABOVE IS SAME AS TOP OF SLAB ELEVATION.
3. NE= NOT ENCOUNTERED WITHIN THE DEPTH OF THE EXPLORATION.

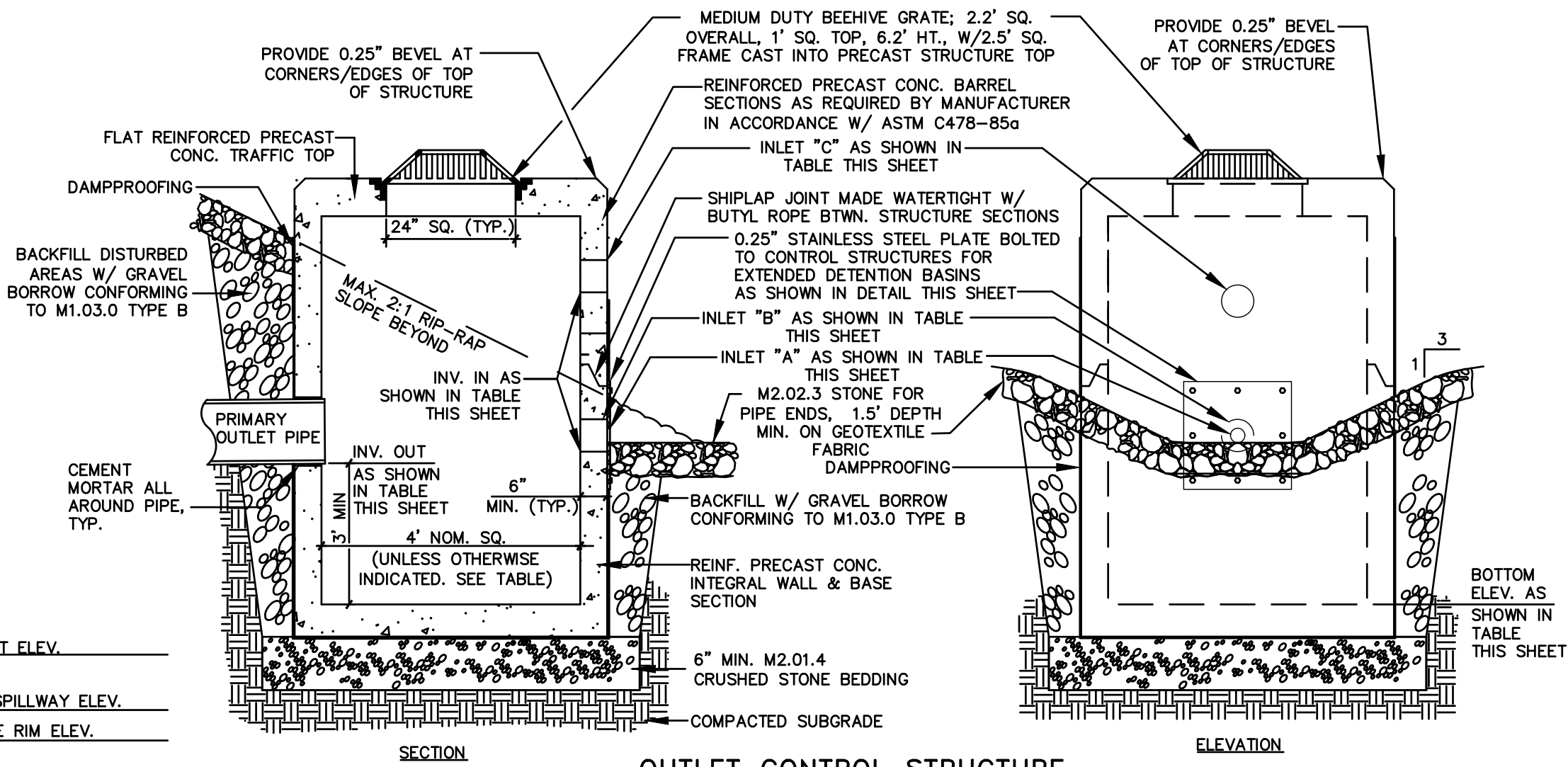
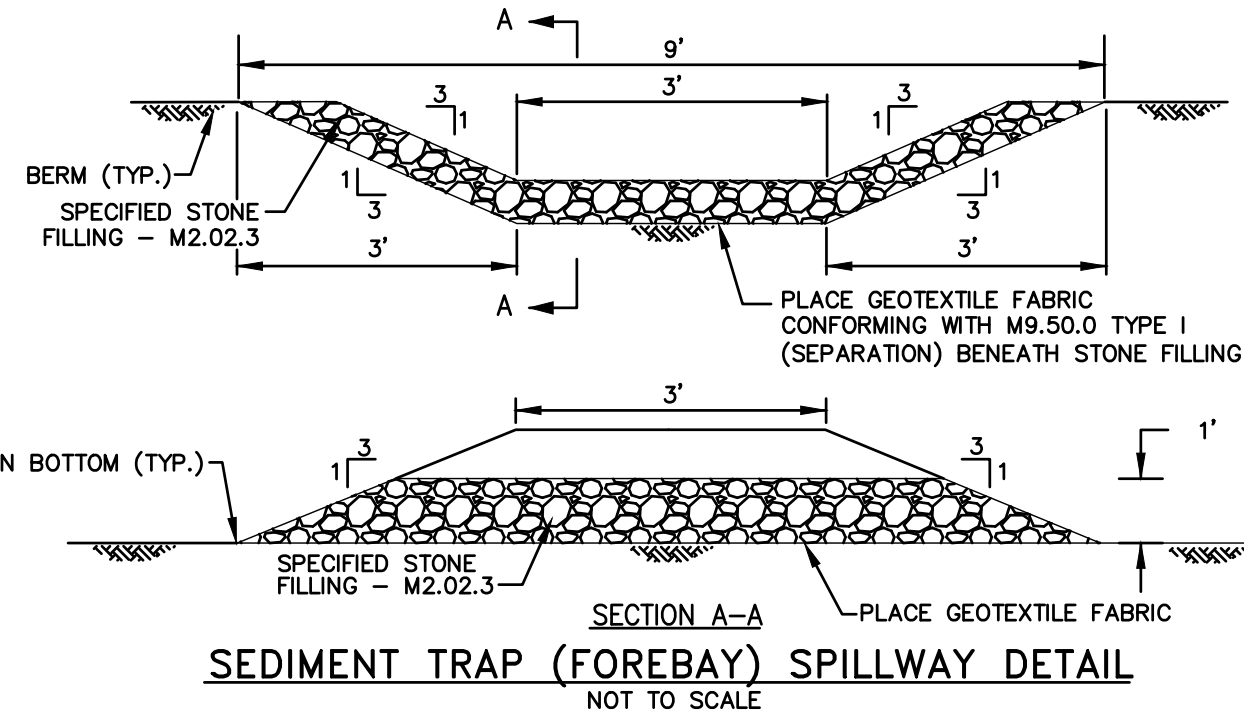
DRAINAGE DESIGN NOTES

DRAINAGE PIPING:

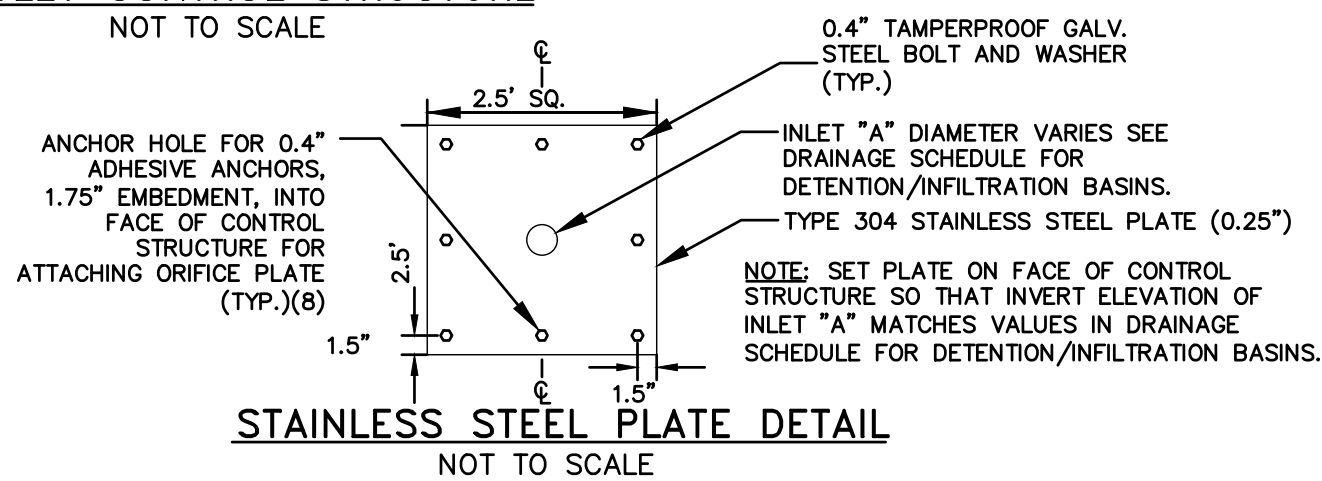
- ALL DRAINAGE PIPE TO CONFORM TO THE CITY OF WORCESTER STANDARDS, REINFORCED CONCRETE PIPE CLASS III, (RCP)
- ALL DRAINAGE TRUNKLINE PIPE TO BE 15" RCP AS SHOWN ON PLANS
- ALL CATCH BASIN CONNECTIONS TO BE 8" DR-18 PIPE AS SHOWN ON PLANS.
- MINIMUM PIPE COVER TO BE 36" AS SHOWN ON DETAIL SHEET.
- ALL CATCH BASIN SHALL USE GREEN TRAP AS SHOWN ON DETAIL SHEET.
- FRAME AND GRATE TO BE CITY OF WORCESTER STANDARDS AS SHOWN ON THIS SHEET.
- CATCH BASIN FRAME TO BE INSTALLED ON 12" MIN. RED SEWER BRICK.

INFILTRATION BASIN:

- INFILTRATION BASIN DESIGN PROVIDES 1 FT. OF FREEBOARD ABOVE SPILLWAY ELEVATION.
- INFILTRATION BASIN TO BE ENCLOSED BY 6FT TALL BLACK VINYL CHAIN LINK FENCING WITH ACCESS GATE.
- FENCING TO BE INSTALLED ON OUTSIDE EDGE OF 10FT WIDE GRAVEL ACCESS ROADWAY AROUND BASIN.
- PLACE 6" MINUS RIP RAP STONE FOR SCOUR PROTECTION AT SPILLWAY ENTRANCE. RIPRAP TO BE INSTALLED 12" THICK ON A 6" BED OF M2.02.0 CRUSHED STONE.
- FOREBAY TO BE GRADED 3:1 TOWARDS BASIN TO MINIMIZE WATER EXIT VELOCITY.
- BASIN AND FOREBAY TO BE MAINTAINED PER FREQUENCY IN MASSACHUSETTS STORMWATER MANAGEMENT HANDBOOK VOL. 2.



OUTLET CONTROL STRUCTURE
NOT TO SCALE



Project
St. Anthony Cir. Subdivision

Date
12/14/21

Scale
1" = 10'

General Notes

3 CON COM PLAN 12/14/21
No. Revision/Issue Date

Firm Name and Address

Joseph Graham, PE

13 Snow Dr.
Westford, MA 01886
(978) 501.2695

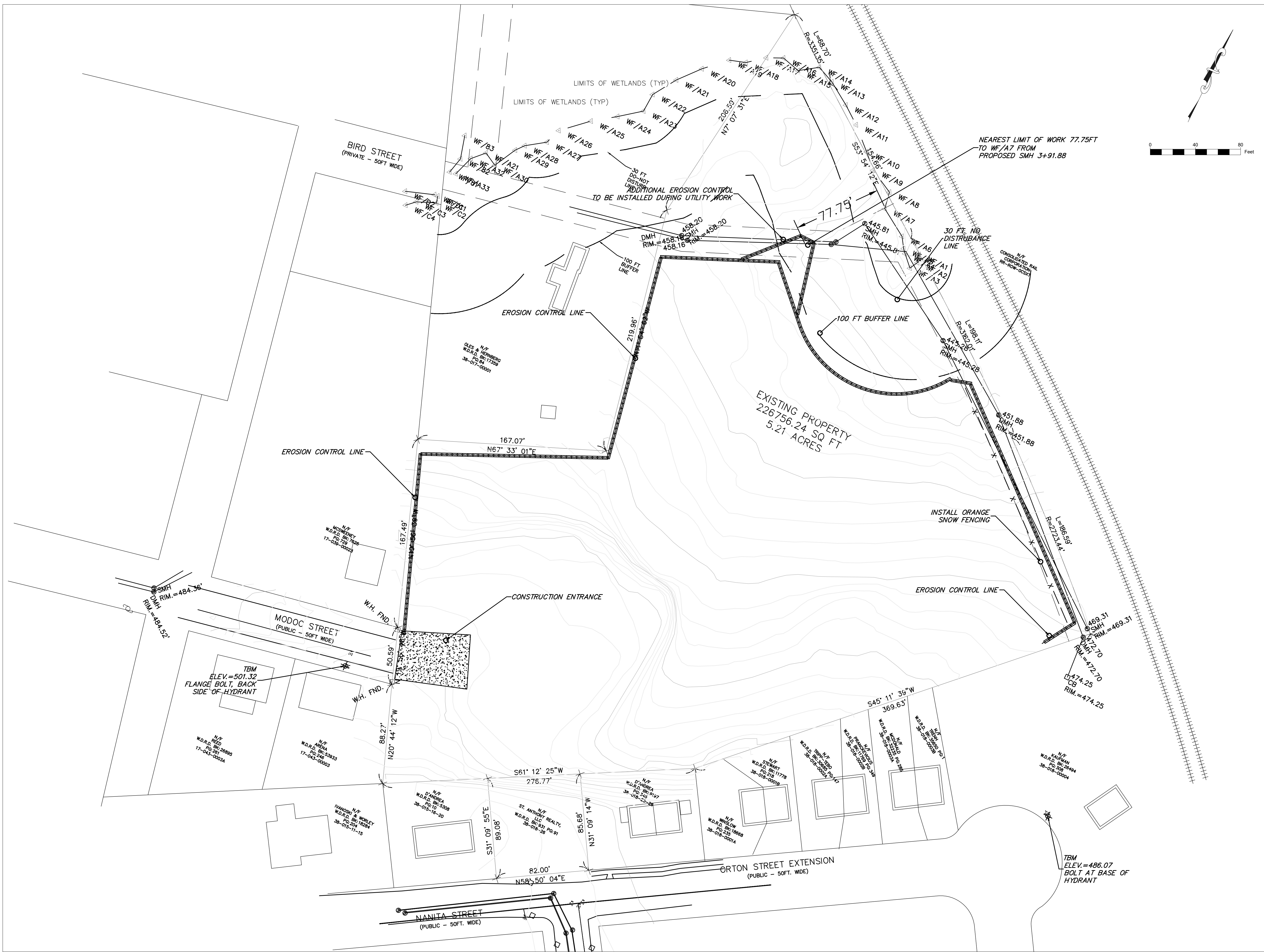
Project Name and Address

St. Anthony Cir. Subdivision

#35 Modoc Street
Worcester, MA 01607

Sheet

C-3.4



Project	St. Anthony Cir. Subdivision
Date	12/14/21
Scale	1" = 40'
General Notes	

- EROSION CONTROL NOTES:
1. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OF MATERIALS WITHIN 100 FEET OF ANY WETLAND OR WATER RESOURCE.
 2. THE CONTRACTOR SHALL NOT FUEL, REPAIR, OR LUBRICATE ANY VEHICLES OR MACHINERY WITHIN 100 FEET OF ANY WETLAND OR WATER RESOURCE.
 3. THE CONTRACTOR SHALL PROTECT ALL WETLANDS AND WATER RESOURCES FROM SILTATION, AND SHALL COMPLY WITH ALL REQUIREMENTS. THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL AND OTHER MITIGATIVE MEASURES, AND RESTORE ALL AREAS, AS SPECIFIED.
 4. ANY OR ALL PROPOSED UTILITY CONNECTIONS (i.e. SEWER & WATER) TO BE INSTALLED PER CITY OF WORCESTER STANDARDS. SEWER AND WATER CONNECTIONS NOT SHOWN FOR CLARITY, TO BE INSTALLED PER CITY OF WORCESTER STANDARDS.
 5. SILTATION SACKS TO BE INSTALLED IN CATCH BASINS DURING CONSTRUCTION AND TO BE MONITORED AND MAINTAINED UNTIL ALL SLOPES HAVE BEEN STABILIZED AND FINAL PAVEMENT COMPLETED.
 6. HAYBALE SILTATION FENCING WILL BE INSTALLED ALONG THE PERIMETER OF THE SITE AND TO REMAIN IN PLACE UNTIL ALL SLOPES ARE STABILIZED.
 7. SILT SACKS SHALL BE INSTALLED UPON INSTALLATION OF PROPOSED CATCH BASINS AND AT THE COMMENCEMENT OF WORK FOR EXISTING CATCH BASINS.
 8. SILT SACKS AND EROSION CONTROL FENCING WILL BE MAINTAINED THROUGHOUT THE CONSTRUCTION.
 9. TIRE SCRUBBER SHALL BE INSTALLED AT SITE ENTRANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

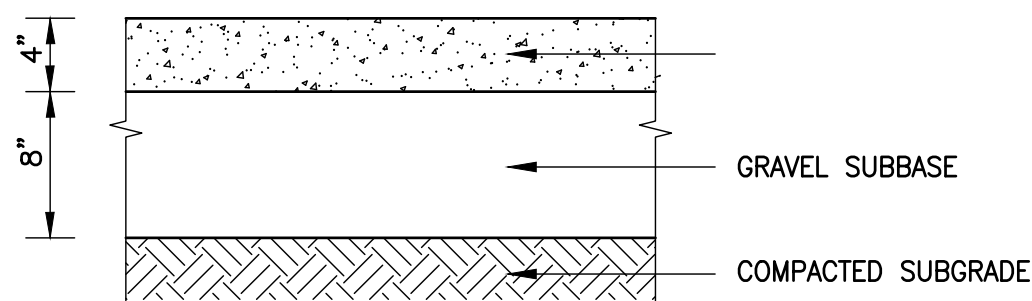
3	CON COM PLAN	12/14/21
No.	Revision/Issue	Date

Firm Name and Address
Joseph Graham, PE

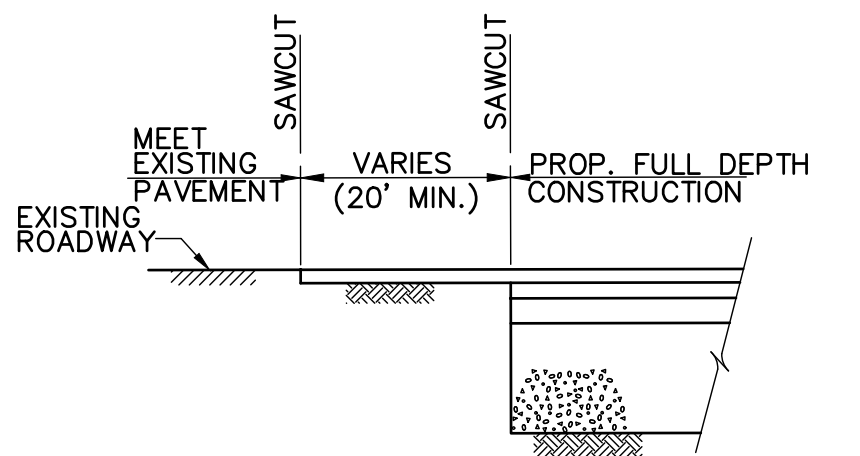
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(978) 501.2695

Project Name and Address
St. Anthony Cir. Subdivision
#35 Modoc Street
Worcester, MA 01607

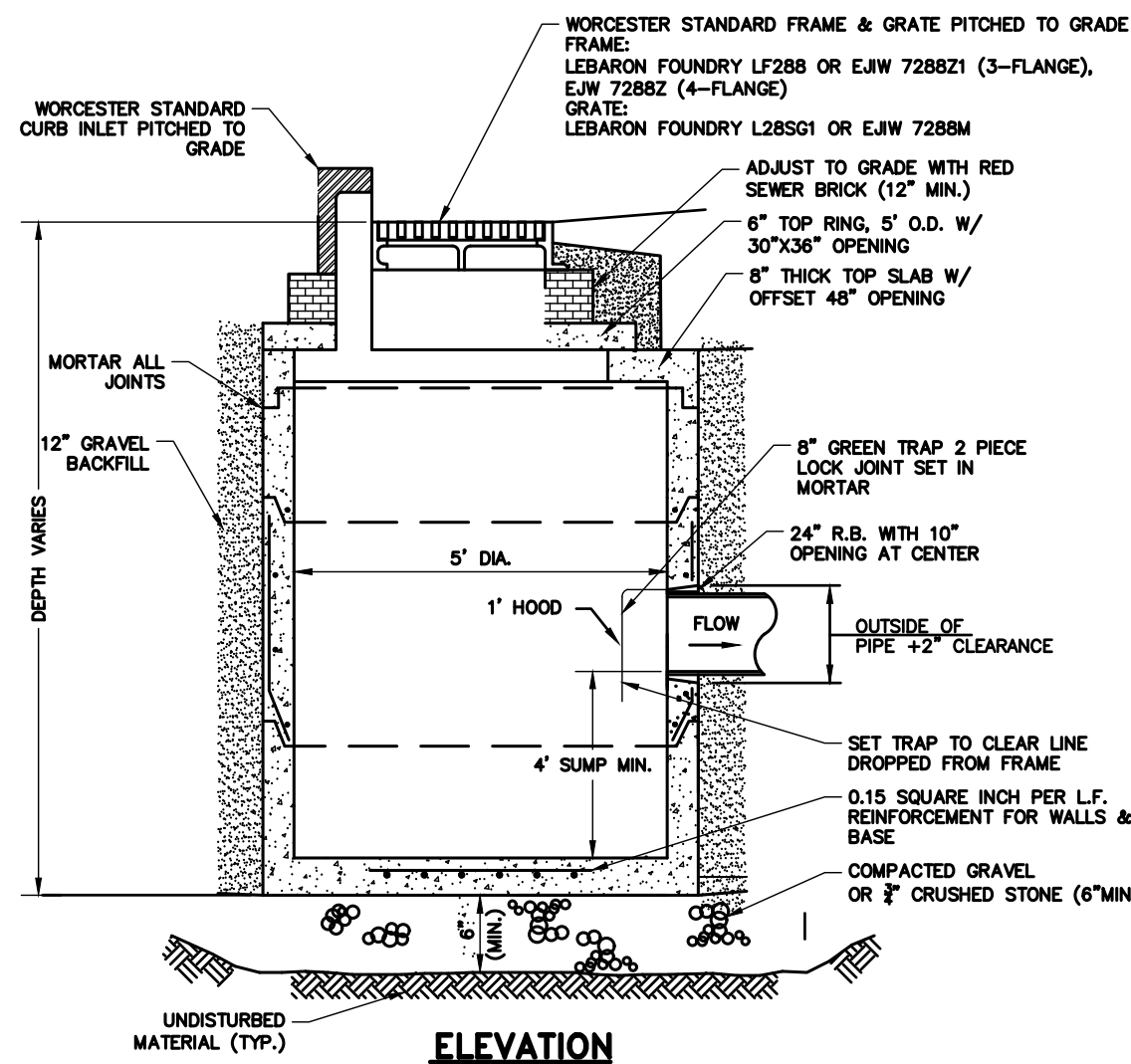
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C-4.1



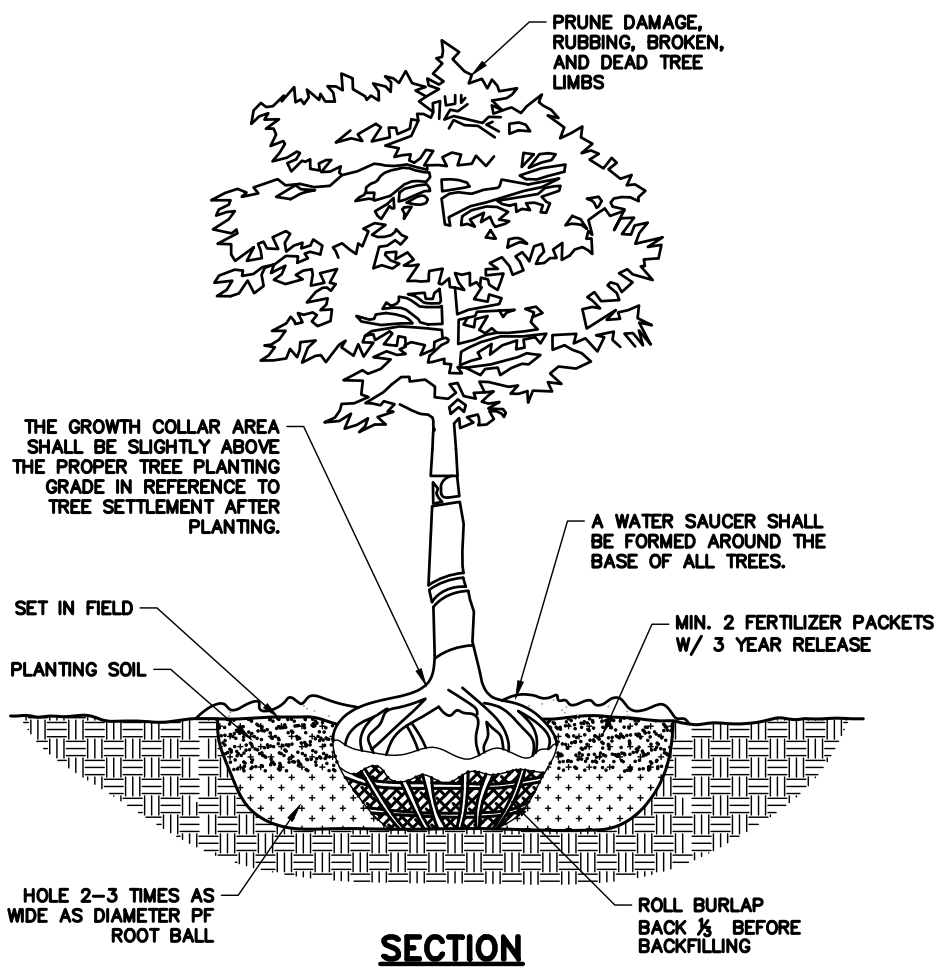
CEM. CONC. SIDEWALK SECTION DETAIL
NOT TO SCALE



FULL DEPTH PAVEMENT TRANSITION
NOT TO SCALE

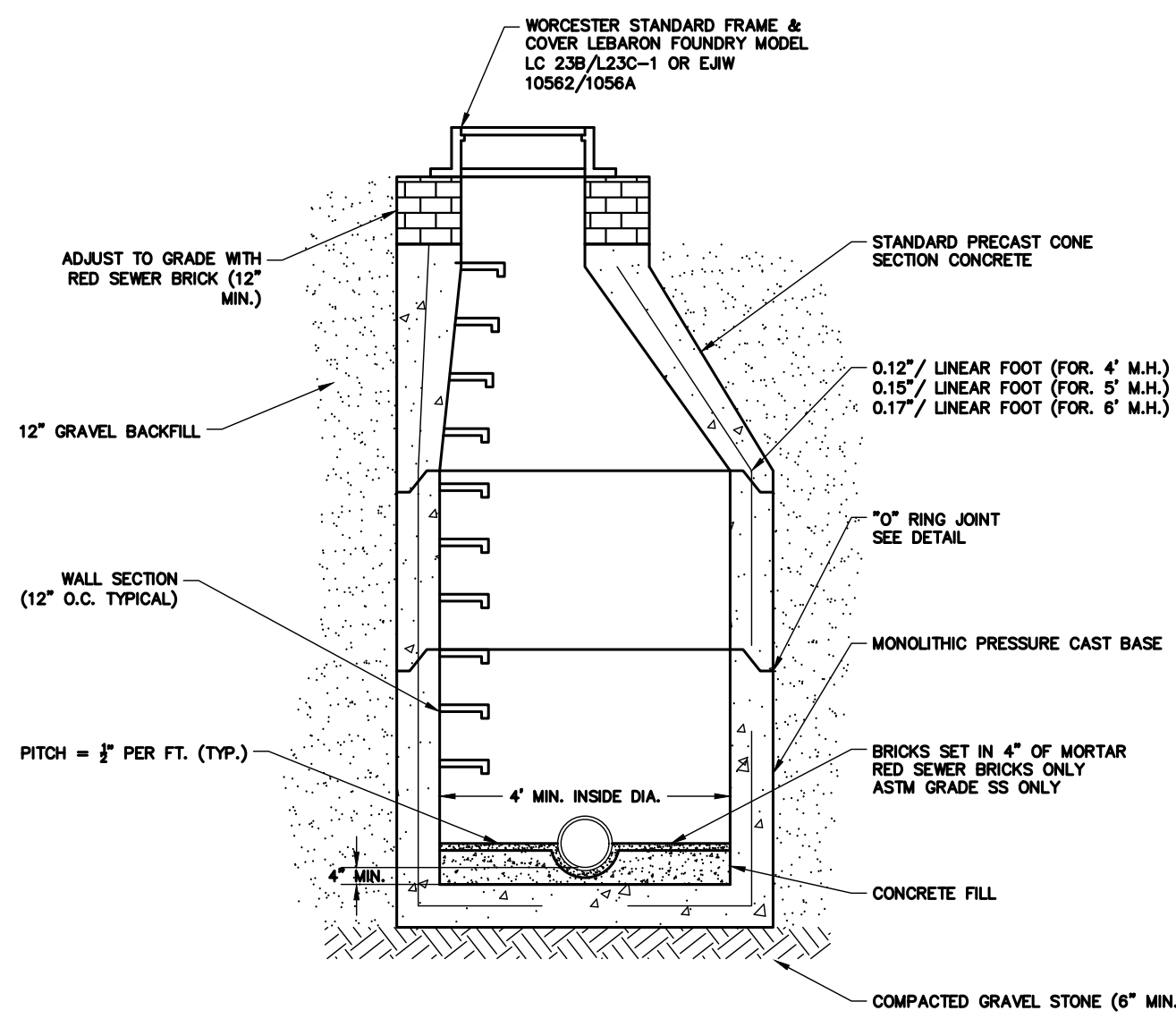


TYPICAL CATCH BASIN WITH FRAME
NOT TO SCALE

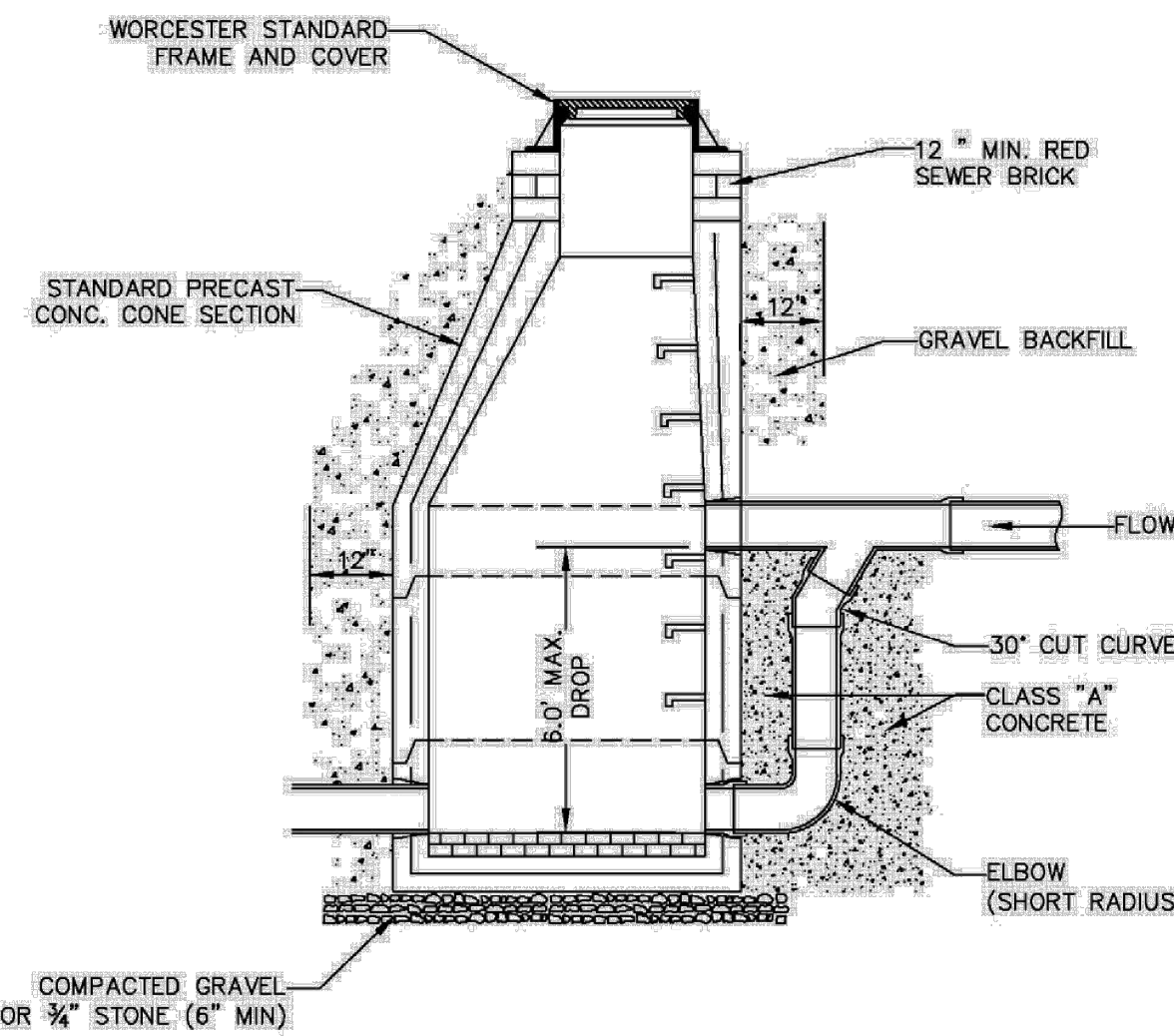


GENERAL NOTES:
1. CONTRACTOR TO LOCATE ALL UNDERGROUND UTILITIES, SPRINKLER SYSTEMS, CITY WATER LINES, AND ETC. BEFORE DIGGING TREE PLANTING PITS.
2. NO TREE STAKES AND NO WRAP IS REQUIRED.
3. ROOT BALL SHALL BE SET ON COMPACTED SOIL AREA TO REDUCE SETTLEMENT OF THE TREE.

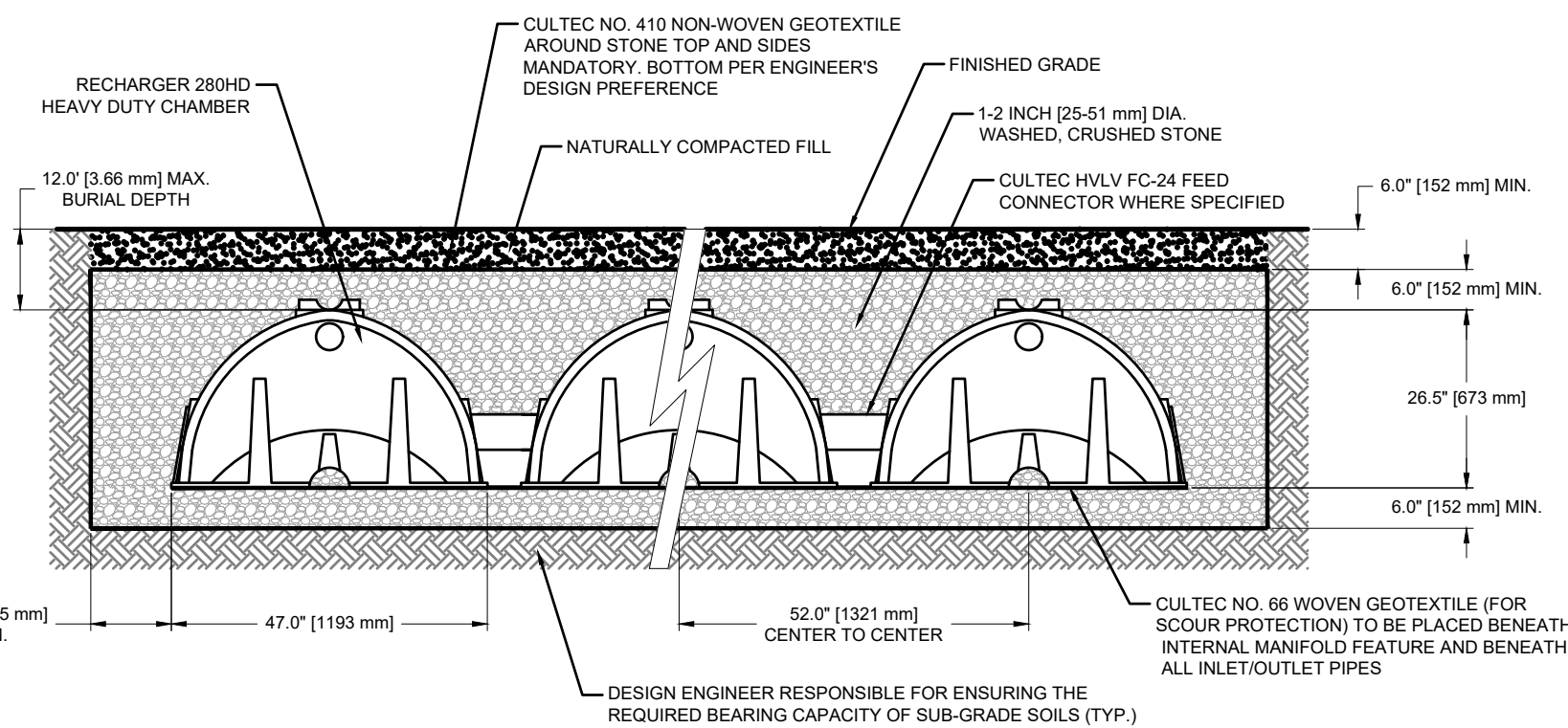
TREE PLANTING DETAIL
NOT TO SCALE



SEWER MANHOLE
NOT TO SCALE

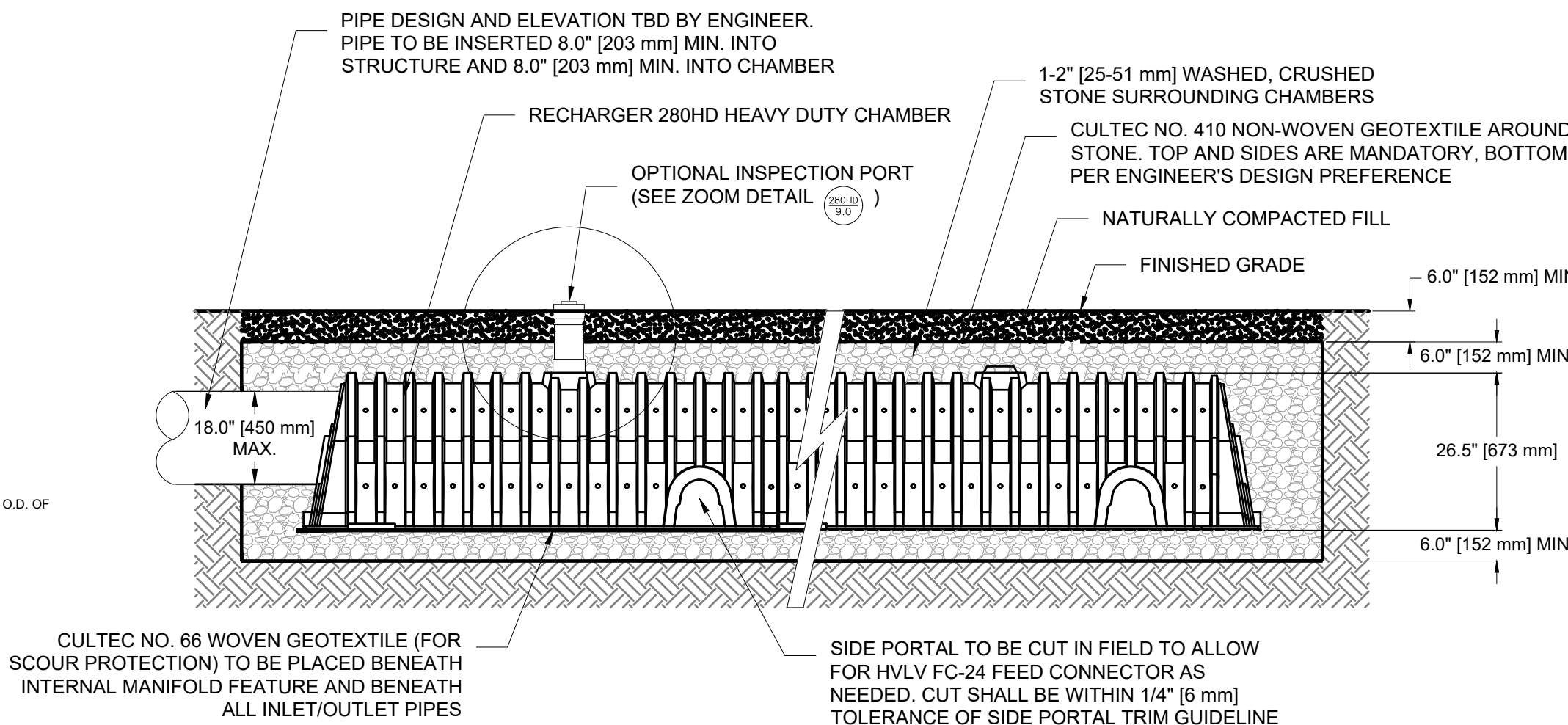
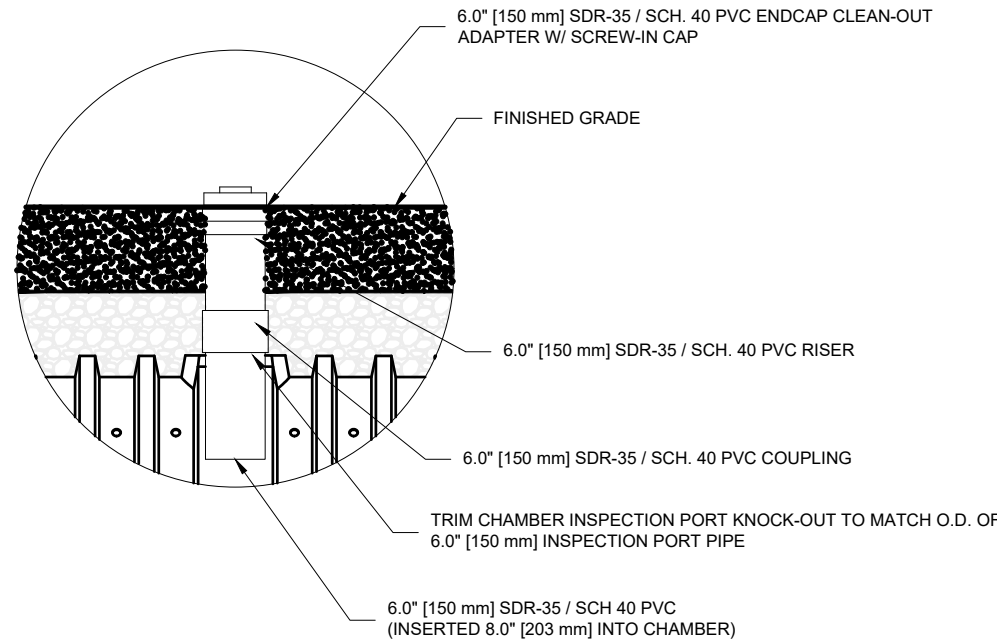


TYPICAL DROP MANHOLE



GENERAL NOTES:
RECHARGER 280HD BY CULTEC, INC. OF BROOKFIELD, CT. STORAGE PROVIDED = 9.21 CF/FT (1.83 m³/m) PER DESIGN UNIT. REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES. MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12' (3.66 m). THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.

ALL RECHARGER 280HD HEAVY DUTY UNITS ARE MARKED WITH A COLOR STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER. ALL RECHARGER 280HD CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.



Project
St. Anthony Cir. Subdivision

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12/14/21

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NA

General Notes

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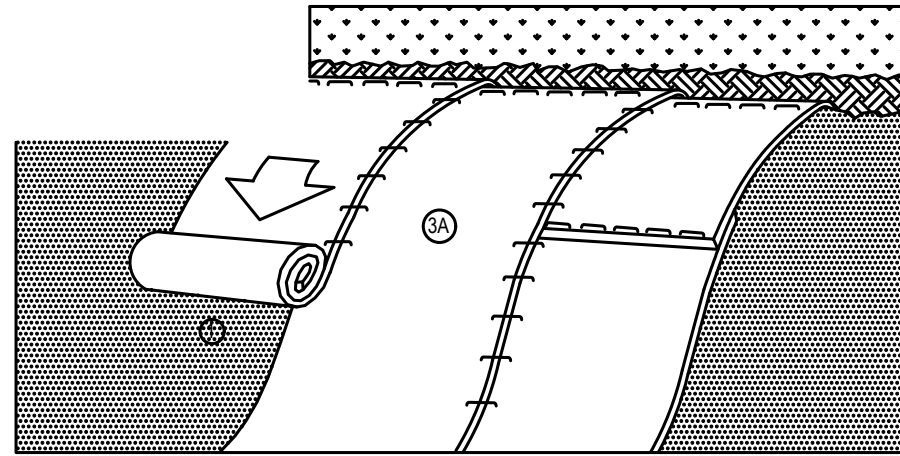
Joseph Graham, PE
13 Snow Dr.
Westford, MA 01886
(978) 501.2695

Project Name and Address

St. Anthony Cir. Subdivision
#35 Modoc Street
Worcester, MA 01607

Sheet

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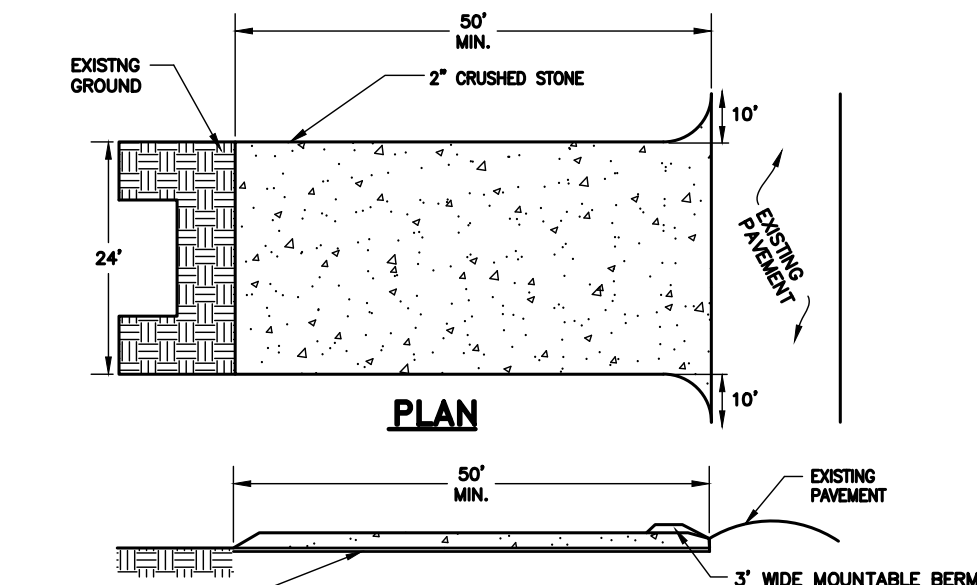


SLOPE INSTALLATION

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15CM) DEEP X 6" (15CM) WIDE TRENCH WITH APPROXIMATELY 12" (30CM) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30CM) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30CM) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2'-5" (5CM-12.5CM) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3' (1.5M) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30CM) APART ACROSS ENTIRE BLANKET WIDTH.

NOTES:

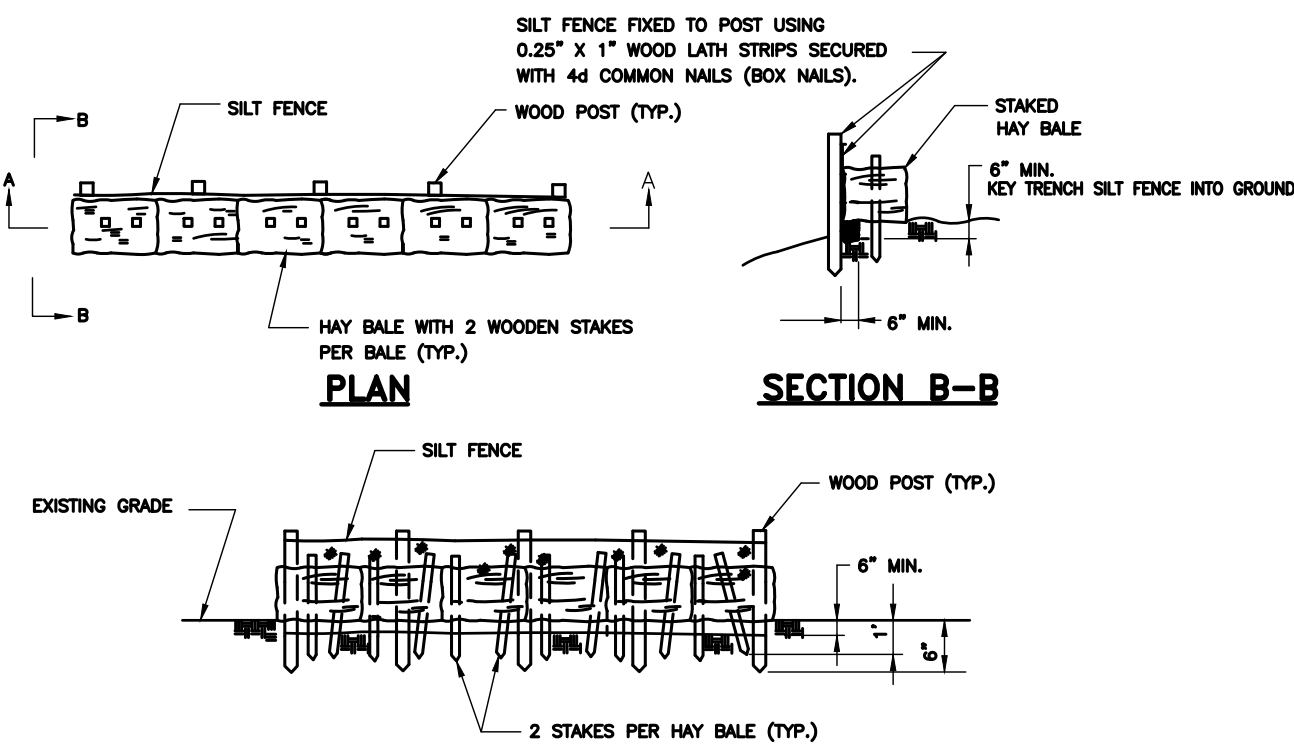
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. IN LOOSE SOIL CONDITIONS THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15CM) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.



SECTION B-B

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



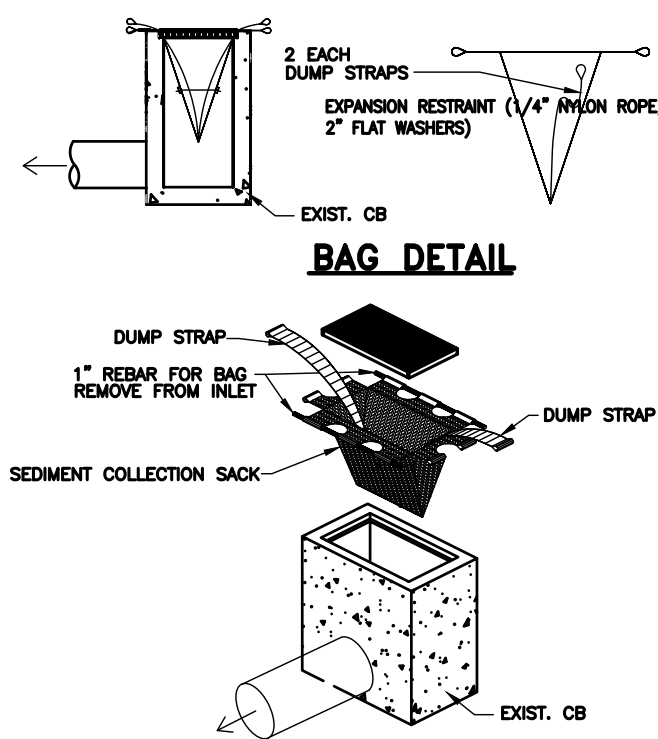
PLAN

SECTION B-B

SECTION A-A

HAY BALES / SILT FENCE EROSION CONTROL DETAILS

NOT TO SCALE

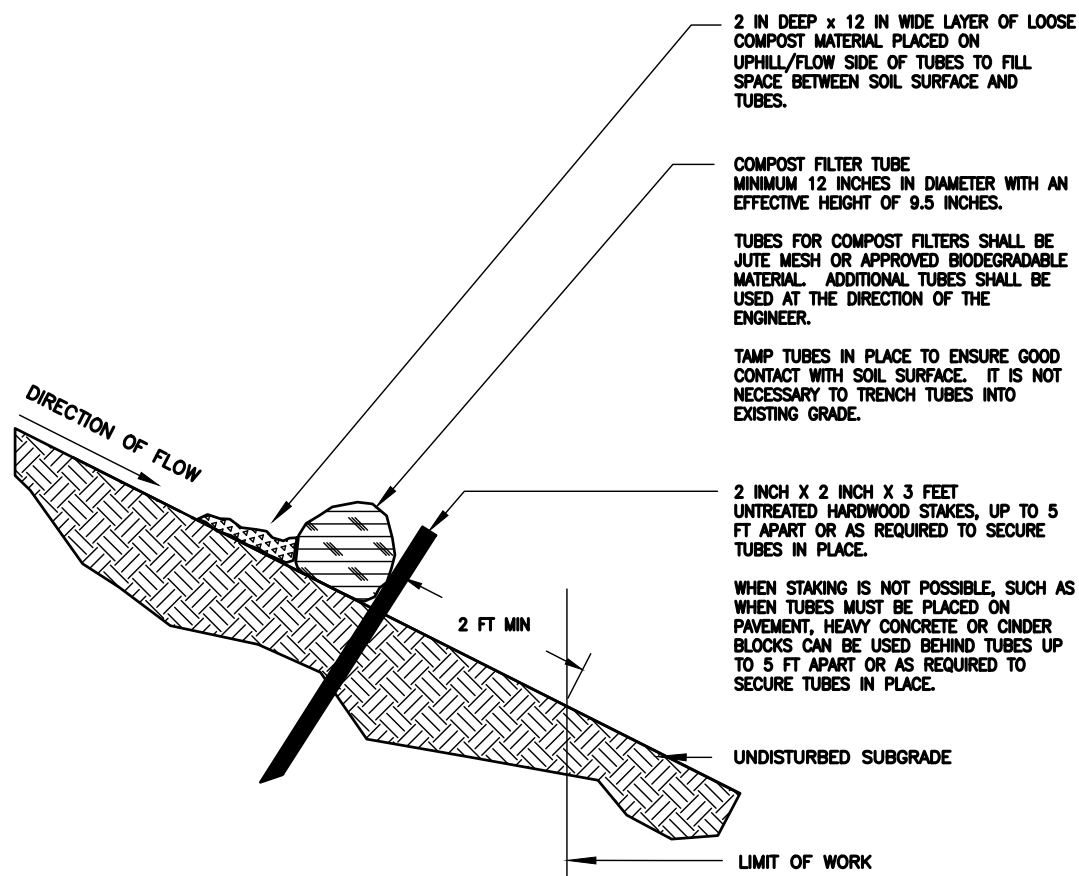


BAG DETAIL

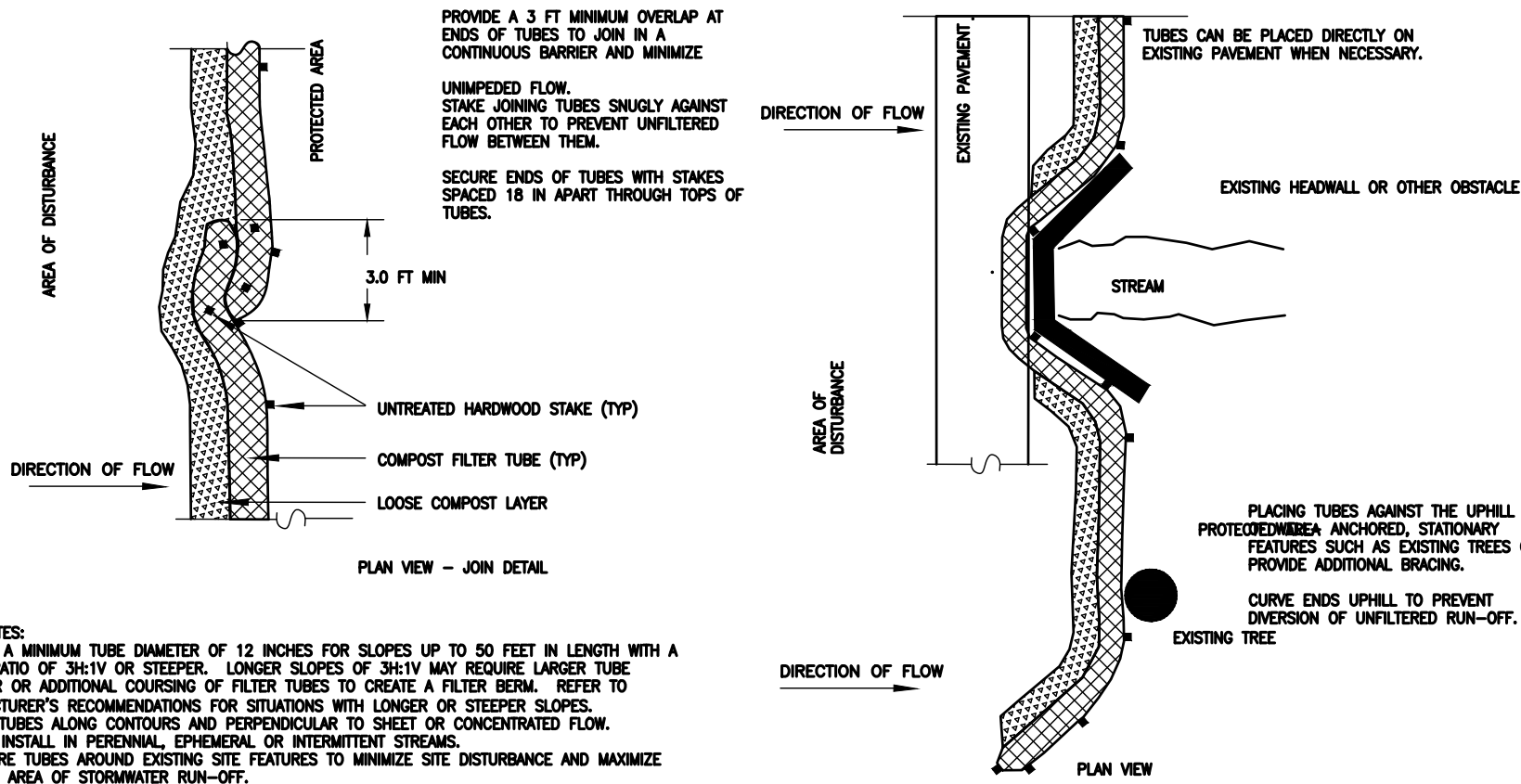
INSTALLATION DETAIL

SILT SACK DETAIL

NOT TO SCALE



- 2 IN DEEP X 12 IN WIDE LAYER OF LOOSE COMPOST MATERIAL PLACED ON UP-HILL/FLOW SIDE OF TUBES TO FILL SPACE BETWEEN SOIL SURFACE AND TUBES.
- COMPOST FILTER TUBE, MINIMUM 12 INCHES IN DIAMETER WITH AN EFFECTIVE HEIGHT OF 9.5 INCHES.
- TUBES FOR COMPOST FILTERS SHALL BE JUTE MESH OR APPROVED BIODEGRADABLE MATERIAL. ADDITIONAL TUBES SHALL BE USED AT THE DIRECTION OF THE ENGINEER.
- TAMP TUBES IN PLACE TO ENSURE GOOD CONTACT WITH SOIL SURFACE. IT IS NOT NECESSARY TO TRENCH TUBES INTO EXISTING GRADE.
- 2 INCH X 2 INCH X 3 FEET UNTREATED HARDWOOD STAKES, UP TO 5 FT APART OR AS REQUIRED TO SECURE TUBES IN PLACE.
- WHEN STAKING IS NOT POSSIBLE, SUCH AS ON PAVEMENT, HEAVY CONCRETE OR OTHER SLOPES, TUBES MUST BE PLACED ON UNDISTURBED SUBGRADE.
- LIMIT OF WORK



GENERAL NOTES:

1. PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES FOR SLOPES UP TO 50 FEET IN LENGTH WITH A SLOPE INTO OF 3:1 OR STEEPER. LONGER SLOPES OF 3:1 OR STEEPER MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSE OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
2. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
3. DO NOT INSTALL IN PERMANENT EPIHEMERAL OR INTERMITTENT STREAMS.
4. CONFIGURE TUBES AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORMWATER RUN-OFF.

COMPOST FILTER TUBES

NOT TO SCALE

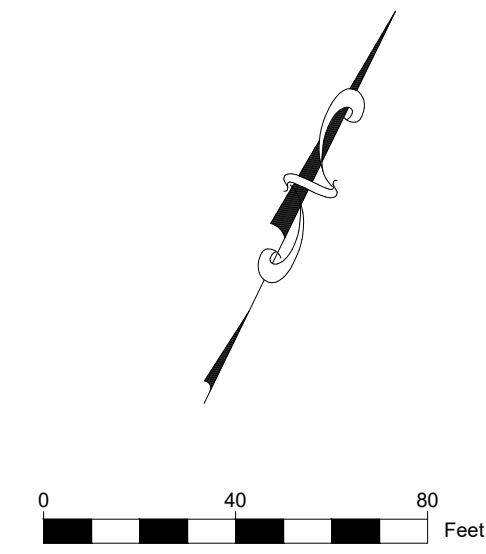
Project St. Anthony Cir. Subdivision	
Date	12/14/21
Scale	NA
General Notes	

3	CON COM PLAN	12/14/21
No.	Revision/Issue	Date

Firm Name and Address Joseph Graham, PE 13 Snow Dr. Westford, MA 01886 (978) 501.2695	
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Project Name and Address St. Anthony Cir. Subdivision #35 Modoc Street Worcester, MA 01607	
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Sheet D-1.2



Project St. Anthony Cir. Subdivision		
Date 12/14/21		
Scale 1" = 40'		
General Notes		
<p>CONSTRUCTION SEQUENCING:</p> <p>1. PHASE 1</p> <p>1.1. DETENTION BASIN CONSTRUCTION TO BE USED AS TEMPORARY SEDIMENTATION BASIN UNTIL CONSTRUCTION OF DRAINAGE AND ROADWAY IS COMPLETE.</p> <p>2. PHASE 2</p> <p>2.1. PHASE 2A</p> <p>2.1.1. CONSTRUCTION OF STONE SWALE WITH CHECK DAMS ALONG THE EASTERN LIMITS OF THE PROJECT.</p> <p>2.2. PHASE 2B</p> <p>2.2.1. BACKFILL AND CONSTRUCTION OF DRAINAGE INFRASTRUCTURE AND ROADWAY WILL CONTINUE CONCURRENTLY AS THE SITE IS A FILL SITE. PERIODICALLY DURING BACKFILLING AND CONSTRUCTION OF THE ROADWAY EROSION CONTROL MATTING WILL BE INSTALLED ALONG THE EASTERN SLOPE TO HELP ESTABLISH TURF. ONCE THE ROADWAY CONSTRUCTION HAS BEEN COMPLETED PAVING WILL COMMENCE FOR THE SUBDIVISION CUL DE SAC.</p> <p>2.2.2.</p> <p>2.2.3. ONCE THE ROADWAY CONSTRUCTION HAS BEEN COMPLETED PAVING WILL COMMENCE FOR THE SUBDIVISION CUL DE SAC.</p> <p>3. PHASE 3</p> <p>3.1. CONSTRUCTION OF REMAINING PROJECT SITE.</p> <p>3.2. DURING CONSTRUCTION OF EACH BUILDING NOT MORE THAN 3 BUILDING LOTS WILL BE CONSTRUCTED AT THE SAME TIME TO LIMIT THE EXPOSED SOIL.</p>		
	<p>PHASE 1 (COMPLETE)</p>	
	<p>PHASE 2 (COMPLETE)</p>	
	<p>PHASE 3 (ONGOING)</p>	
3	CON COM PLAN	12/14/21
No.	Revision/Issue	Date

<p>Firm Name and Address</p> <p style="text-align: center;">Joseph Graham, PE</p> <p style="text-align: center;">13 Snow Dr.</p> <p style="text-align: center;">Westford, MA 01886</p> <p style="text-align: center;">(978) 501.2695</p>
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<p>Project Name and Address</p> <p>St. Anthony Cir. Subdivision</p> <p>#35 Modoc Street</p> <p>Worcester, MA 01607</p>
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<p>Sheet</p> <p style="text-align: center; font-size: 2em;">D-2.0</p>
